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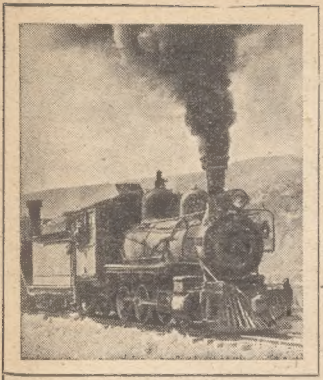

RAILROAD MAGAZINE

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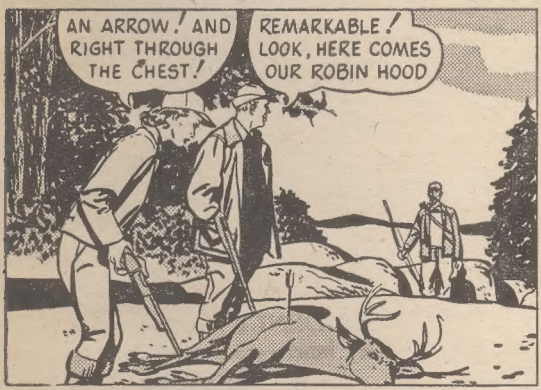
HERB'S ARROW HIT THE MARK AND THEN . . .



HERB HALL! WHY, DAD, HE'S THE MOVIE ARCHER!
DISCOVERED BENEATH MY BACKWOOD'S BEARD. AND AREN'T YOU PAUL LAURIE, THE FAMOUS HUNTER?

SO NEXT WEEK WE HOP TO ALASKA FOR GIANT MOOSE. LIKE TO COME ALONG?
WOULD I! AND HOW!
WONDERFUL . . HE'S KEEN
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SUDDENLY we were on dry land—no more water to wet the wheels

Dead Engine

IT was raining cats and dogs with no sign of a let up for some time. The roundhouse gang had retreated to the ready-track shanty. Packed neatly into the corners, along with a few engineers, firemen, brakemen and hostlers, the gang watched the rain and the inevitable railroaders' reminiscences began. A hostler noted a dead engine going by coupled in a train, and an engineer began a story:

I was called on night (he said) to take a special train up the branch line to bring back a party of fishermen who'd been vacationing up at the dam. Most of the fishermen took their families along with them, so there were about a hundred people up there.

The branch line was hilly and full of curves, for it followed the river for several miles. I had a heck of a time getting the three coaches up the hills with the little tea kettle of an engine I had. There was a steady mist falling and it made the rail like ice. The drivers on the mill went about three times as far as the engine did: slip, slip, slip and slip some more. We finally dragged into the station at the dam, turned the train on the wye and waited for ten a.m., the scheduled departing time.

It was raining cats and dogs now and the agent at the station informed us that the radio had warned the people along the river bottom to be ready to move because a full-fledged cloudburst was on the way.

The busses that were bringing our passengers to the station, got stuck in the mud and they were over an hour late. Before all the passengers got loaded the rain was coming down by the bucketful and I could see the river getting higher and higher till only the tops of the trees were visible.

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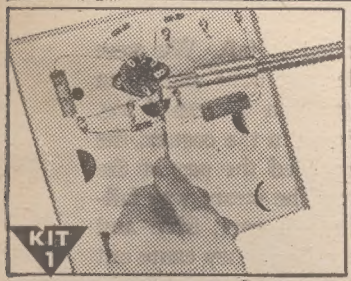

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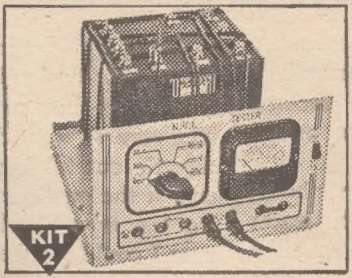
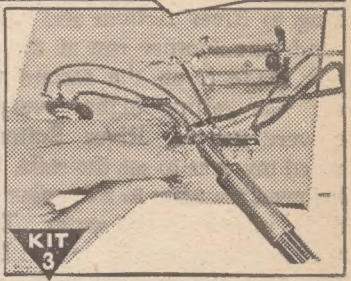


Early in my course I show you how to build this N.R.I. Tester with parts I send. It soon helps you fix neighborhood Radios and earn EXTRA money in spare time.



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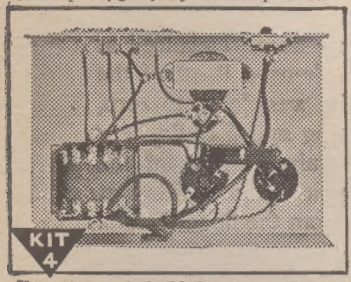
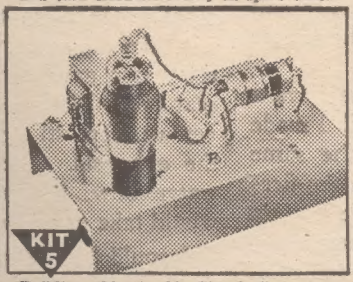


You get parts to build this Vacuum Tube Power Pack; make changes which give you experience with packs of many kinds; learn to correct power pack troubles.



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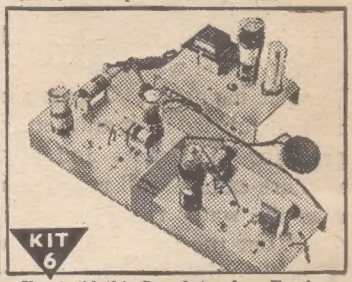

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When we finally highballed, we made good time for the first six miles solely because it was down hill.

Then the roadbed swung down close to the river and I could see the rising river sprawled over land it had never occupied before. And in a couple of places the water was lapping at the ties.

We stalled on the short hill just before getting to River Bottom and had to back up and take another run at the hill. We barely made it on the second try. The water was getting higher every second. We were nearing River Bottom and I strained my eyes to see the rails.

I slowed the train to five miles per hour, and the pilot split the water. The water slowed the speed still more and I gave the little mill a little steam. Bubbles rose from the drivers as they cut through the water. Up and up the water came, till only half of the drivers were visible. The whole train was in the water now.

Then it happened. The engine gave a shudder, wobbled a bit and settled. I made a grab for the brakes and at the same time there came a dull roar from the firebox as the water rushed into the firebox and put out the fire. Then all was quiet save for the rain pounding on the cab roof.

I looked at the fireman and he looked at me. Neither of us said a word. There was only one thing left to do. The fire was out but there was steam left on the boiler. Maybe it was enough to get us out of the water, maybe not. Anyway, I was going to try. I opened the throttle and the drivers slipped and churned the water. Can't do that, I thought; need every pound of steam the boiler has. Although I knew that the sand pipes were probably plugged up with wet sand, I opened the sanders; maybe a little would get through. The drivers caught and the exhaust boomed wetly. That wasn't so good. There was no fire to superheat the steam and it takes just about twice as much wet steam to run an engine. The pressure was back to a hundred-five pounds already. Still, we were moving.

After several seconds I opened the window and looked back. I saw the last car dip down through that hole the engine had dropped into. I widened the throttle a bit more and pulled back on the reverse a few notches. But the speed started to slacken and I was forced to put those notches back on the reverse. Ninety-six the gage said now, and a long way to go, for I still couldn't see the end of the water. Still I could see the bottom guide on the crosshead now.

The speed continued to fall. We were going only five miles per hour and when we slowed only a fraction it seemed big. The reverse went down in the corner, the throttle out till it reached the peg at the end of the quadrant. The steam was falling fast now. Eighty, seventy, fifty, and now I could see the rails as they came out of the water. We were going to make it.

Suddenly, we were on dry ground, no more water to wet the wheels. I felt good, just like a conquering hero. I glanced at the steam gage and almost fell off of the seat box. The needle was down to zero, yet we were still going and I could hear the exhausts. The train was out of the water now, beating it up the hill that would take us away from the flood waters.

I could hardly believe what I saw, yet there it was: a dead engine pulling the train, picking up speed with it on a hill.

The old engineer hesitated and glanced around the shanty.

"Then what happened?" asked a fireman. "How was that dead engine able to pull that train?"

"Well," said the engineer, "I don't know. My wife woke me up for work."

"What?" shouted everyone in the shanty.

"You mean that you only dreamt that story you told us?" asked an irritated fireman.

The engineer nodded.

The ready track shanty was still. The door opened suddenly and the roundhouse foreman stuck his head in.

"Come, men," he said. "It has stopped raining. Let's get back to work."

And they all filed out much wiser than when they went in.

—*William Jay*

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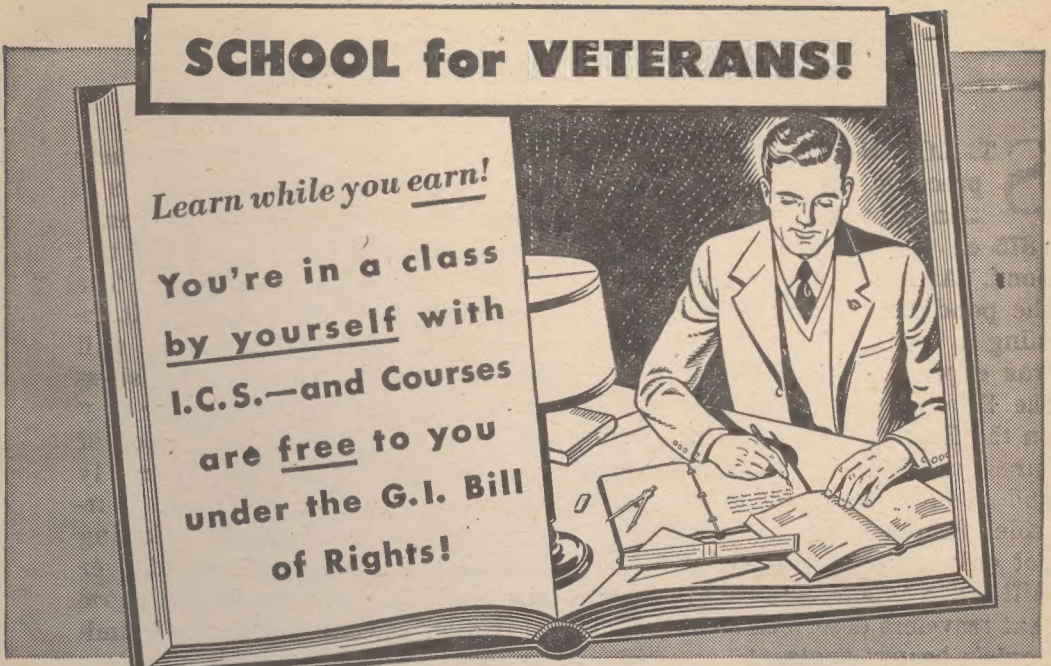

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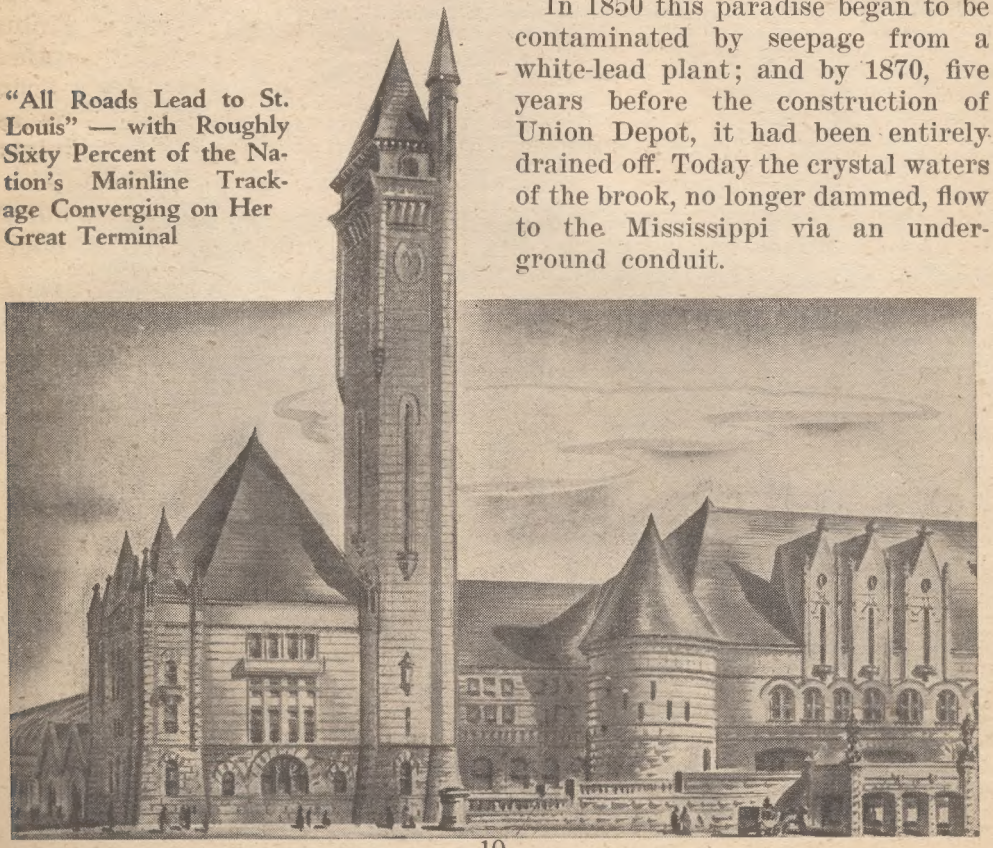
Union Station

By FREEMAN H. HUBBARD

ST. LOUIS Union Depot, which preceded the great Union Station of today, was erected in 1875 on the site of an ancient mill pond. An early settler had created the pond 110 years before by damming a brook. This body of water was expanded, just about the time the Revolutionary War was ending on the Eastern Seaboard, into a picturesque lake nearly three miles long and about three-quarters of a mile wide. Known as Chouteau's Pond, it not only supplied power for a flour mill but was surrounded by a park that travelers described as one of St. Louis's beauty spots.

Village society would stroll there on a Sunday afternoon, the belles in hoop skirts flaunting dainty beribboned parasols, the men wearing tall beavers and mauve waistcoats. The pond was a faultless mirror. It reflected the blue sky, the stone mill with a big water-wheel turning slowly, the willows on its bank, the tiny sailboats of children, and a flock of stately ducks that kept discreetly out of reach of those children. During the long cold winters skating and sledding parties skimmed over the ice, huge bonfires on the shore providing warmth and night illumination.

In 1850 this paradise began to be contaminated by seepage from a white-lead plant; and by 1870, five years before the construction of Union Depot, it had been entirely drained off. Today the crystal waters of the brook, no longer dammed, flow to the Mississippi via an underground conduit.



"All Roads Lead to St. Louis" — with Roughly Sixty Percent of the Nation's Mainline Trackage Converging on Her Great Terminal

Union Depot stood at 12th and Poplar streets. Its successor, the present Union Station, stands not far from there, on Market Street between 18th and 20th. Both were built partly on the old shore, partly on the bed, of Chouteau's Pond. The Chouteau family still retains some of its ancestral areas in that vicinity.

A rather modest, three-story brownstone structure, Union Depot showed the gingerbread architecture typical of the Seventies, with a churchlike clock spire lower than its chimney top. Union Station, on the other hand, is a massive stone pile resembling a bastioned city gate of medieval times. Really a city in itself, the edifice covers all of twenty acres, not counting the track approaches, and has an impressive clock tower, like a campanile, 230 feet high.

The question is often asked, "What is America's greatest railroad station?" You could answer it at least three different ways, and all three would be right, depending upon how you define the word *greatest.* Size is the most obvious measurement. By actual checkup of floor and track space, two New York buildings take first and second places. These two are Grand Central Terminal with more than two million square feet, and Pennsylvania Station, nearly a million and a quarter.

Another significant test is the number of passenger tracks. Here again Grand Central tops the list with forty-nine tracks on two levels. Next comes St. Louis Union Station with forty-two, all on the street level. Among the runners-up are Washington Union Station, thirty-three on two levels, and the new Los Angeles Union Terminal, thirty on one level. As a convenience for travelers, the Gateway City of St. Louis has the largest assemblage of tracks on the same level.

A depot may also be rated from the multitude of passenger trains using it. With this yardstick no other edifice can touch New York's Penn Station, which boasts as many as nine hundred trains from midnight to midnight. Second is Grand Central, ranging between four hundred fifty and six hundred. The St. Louis

AERIAL view of Union Station today. Bottom center: Perry interlocking tower, which controls the movement of all trains entering or leaving station

Union Station with from two hundred to two twenty, seems to be in about seventh place, and although exact comparative figures are not available, the intervening ones apparently are the Chicago and Washington Union Stations and Boston's North and South Stations.

In fairness to St. Louis, however, it must be stated that the first six in this group have relatively larger suburban train movements. Suburban trains require less servicing, less baggage handling and less use of other facilities than do the long-distance expresses.

A FOURTH method of gaging a terminal's importance to the nation is based upon the number of railroads it serves. By this token St. Louis Union Station stands unchallenged. Under its vast trainshed rolls an endless caravan of trains representing seventeen different roads. For this reason and because all tracks, the concourse, the main waiting room, and most other facilities are situated on the street level, the St. Louis terminal is described as one where "There's no change of stations, no steps to climb."

Its closest rival, Kansas City Union Station, can muster only a dozen railroads. This is followed by St. Paul Union Station, nine roads; Dallas Union Station, eight; Cincinnati Union Terminal, seven; Chicago's Dearboarn Station, seven; Denver Union Station, six. Down in New Orleans, architects are busy design-

ing a new union passenger terminal to accommodate seven trunk lines.

"Across the inner end of St. Louis trainshed there is lined up a sight seen nowhere else on earth," chants Robert S. Henry in his book, *This Fascinating Railroad Business,* "the decorated and illuminated rear ends of trains of nearly a score of railroads, running from one station to points as remote and as diverse as Mexico City, the Pacific Coast, the shores of New England and the tropical tip of Florida."

Included are some of the country's foremost rail systems. The Missouri Pacific, as might be expected from its geographical location, schedules more St. Louis trains than do any of the others. The Pennsylvania, the Baltimore & Ohio, the New York Central, and the Katy also use the mammoth station. So do the Burlington, the Chicago & Eastern Illinois, the Cotton Belt, the Frisco, the Illinois Central, the Louisville & Nashville, the Nickel Plate, the Rock Island, the Southern, and the Wabash as do the Gulf, Mobile & Ohio and its newly-acquired Alton. On the tail of this merger, the Santa Fe has just signed up for trackage rights into St. Louis.

Altogether, seventeen trunk lines. Statisticians of the "All-roads-lead-to-St.-Louis" school of thought assert that if you total the mileage of these seventeen you get above 100,000 miles of double iron. They say, furthermore, that if you tack onto this the mileage of parent or affiliated companies you find that the steel network entering St. Louis is roughly sixty percent of the mainline trackage in the entire United States.

Fifteen of the seventeen roads using Union Station are united in a corporation called the Terminal

MISSOURI PACIFIC ***Colorado Eagle*** backs into Union Station at high noon. That's an Alton Diesel threading the track maze behind her

Railroad Association of St. Louis. The TRRA owns and operates Union Station and adjacent passenger and freight facilities, including three hundred and fifty miles of track, nine classification yards, twenty-seven team yards situated on both sides of the Mississippi, two bridges across that river, and an under-city tunnel almost a mile long. Fruits, vegetables and other perishable freight requiring refrigeration are cared for in a plant equipped for icing several hundred cars a day. Claims have been made that St. Louis handles more perishables than any other city. Up to four hundred tons of ice a day are used to refrigerate the reefers that roll over Terminal Association rails.

There may be some doubt about the comparative greatness of America's various railroad stations, but the TRRA title of the world's largest unified terminal system is well established. With so many roads and facilities linked in one setup, St. Louis Terminal stands proudly on top of the globe. But so vast and influential is this organization that it often finds itself a target for criticism.

"Some people would have you believe," declares TRRA President P. J. Watson, Jr., "that the Terminal is a huge monopoly owned by portly rich men who chew on their cigars in palatial ease while counting their profits. However, there are no profits. The Terminal Association is a non-profit group. The charges made for use of its facilities are apportioned so that they will produce just enough money to pay fixed charges and operating expenses."

P. J., a rugged executive whose vigor and facial contour belie his three-score years, has been railroad-

FOUR HUNDRED tons of ice probed from endless conveyor on this platform into refrigerator car bunkers each day make St. Louis Terminal the largest servicer of America's rolling icebox fleet

ing most of the time since he landed his first job in 1903 as a Pennsy rodman not far from his native town, Dunkirk, N. Y. He worked for the Vandalia (now PRR), the C&EI, the Alton, and the Kansas City Terminal Railway. The Kansas City job was ideal training for his present position. In 1938 Mr. Watson resigned from the KCT presidency to head the TRRA. Among his souvenirs is a *Croix de Guerre*, awarded by General Petain for the distinction with which he served overseas as a major of U.S. Engineers in World War I.

"One sour note struck in a recent campaign to revitalize St. Louis," he says, "was unwarranted and unjust criticism of the Terminal. Certain interests pointed to it as a steel-tentacled octopus choking the very life out of the city. Nothing could be further from the truth. The Terminal not only has been, but will continue to be, one of the most important factors—if not the most important—in creating and continuing a prosperous St. Louis."

Over its three divisions, the Eads, the Merchants and the Wiggins, the TRRA operates one hundred steam locomotives and about half that many Diesels, all of them switchers. It connects with twenty-five other roads, employs an army of 4500 men and women, and caters to 1450 industries. Last year it handled nearly three million freight cars, including 1,200,000 non-revenue empties. Coupled together that number of cars would make a train 23,160 miles in length, almost long enough to circle the earth at the equator. Last year it also piloted into and out of Union Station almost 80,000 passenger trains of 714,000 cars, carrying an estimated twenty-three million passengers.

TRRA President Watson believes Terminal creates a prosperous St. Louis

TERMINAL ASSOCIATION history may be traced back to 1853—three years after the pollution of Chouteau's Pond—when one of its predecessors, the Wiggins Ferry Company, began hauling travelers and merchandise across the bridgeless Mississippi. A mighty tide of emigration was pushing westward, and the company cashed in on it. After developing railroad approaches on both river banks, they built ferry boats large enough to transport boxcars. In this way they eliminated the need for unloading and reloading rail shipments.

But the makeshift proved too cumbersome for the growing empire of the West. In 1864 a company was chartered to span the "Father of Waters" with a bridge at St. Louis. James B. Eads designed a massive bridge 6442 feet long and supervised its construction. Not only did he

EADS BRIDGE, with St. Louis, Kansas City & Northern train on Mississippi levee in days when Wabash controlled Terminal set-up

battle against physical obstacles such as the river's great width, powerful current, a sand bank one hundred feet deep on the east bank, hulks of submerged ships, and even a tornado, but he also had to fight the ferry interests that were monopolizing river traffic.

River men induced the Secretary of War to halt work on the partly finished bridge on the flimsy pretext that it interfered with navigation. Thereupon Eads and Dr. William Taussig, chairman of the bridge company's executive board, journeyed to Washington and laid their case before President Grant. The President overruled his cabinet member, and the bridge builders went back to the job.

Meanwhile, in 1870, the railroad tunnel was constructed. This, too, was a spectacular engineering feat, its purpose being to avoid the need for routing trains through the streets of downtown St. Louis. The 4095-foot tunnel connects Eads Bridge with the section known as Mill Creek

Valley. It is really a double archway with two semi-circular brick and masonry vaults, one for each of the two tracks. The tunnel was built by evacuating city streets from curb to curb and erecting arched walls thick enough to sustain the traffic of vehicles overhead.

On July 4th, 1874, the much-heralded Eads Bridge and tunnel were completed and opened to the public with gala festivities. There were flights of oratory—but no trains! Not one freight or passenger train rumbled over the new span, either on its dedication day or for a year thereafter. People could not understand it. Hadn't the big bridge been erected at staggering cost of labor and money so that land traffic of all kinds might move from one state to the other without being slowed down by ferry boats?

Angry conferences were held. It seemed that some technical details had been overlooked. Illinois railroad corporations had no legal right to turn a wheel in Missouri, while the bridge company was not even authorized to operate a railroad in either state. Bridge officials chewed their fingernails and pulled at their side whiskers. Bankruptcy stared them in the face. The revenue from vehicular traffic—substantial as it was—was only pin money compared with what they had hoped to collect from the iron horse.

AFTER A YEAR, the crisis was eased by the formation of two additional companies, with franchises to run freight trains in both states. Then railroad shekels started to clink into the bridge coffers. Brass hats slept better at night. The next step was to organize still another concern. This one erected St. Louis's

MERCHANT'S elevated line from Eads Bridge to Carr Street. Center: ***The Admiral,*** streamlined and air-conditioned, world's biggest excursion boat

first Union Depot and began operating passenger service across the river.

Completed one year after the dedication of Eads Bridge, Union Depot accommodated fourteen trains a day. Oddly enough, no speeches marked its opening. One of the first passengers to enter its train gates was General William T. ("War is hell") Sherman, then a resident of St. Louis, who was on his way to Boston for the Bunker Hill Centennial.

St. Louisans promptly adopted the new station as a social center, just as their ancestors had favored the Chouteau's Pond site on which it stood. Going down to the depot on Sunday to see the trains puff in became a popular fad. After all, aside from attending church, what else was there to do on a Sabbath in the 1870's? Old Auguste Chouteau, the French trader who founded St. Louis, might well have been pleased had he lived to see human life swirling happily around the place where curious visitors once watched the water-wheel and the placid white ducks on his pond.

Meanwhile, a certain railroad magnate named Jay Gould, a dapper little man with square-cut beard, stole a march on his rivals by signing a 500-year lease on Eads Bridge and tunnel on behalf of two lines he controlled, the Missouri Pacific and the Wabash. Howls of protest went up. Competing carriers, though still permitted to use the bridge and tunnel, felt they were victims of unfair discrimination.

To allay this tempest and solve the problem permanently, various railroads in that area proposed that the City of St. Louis acquire land, build terminals and other property, and grant the use of them to incoming and outgoing traffic on a rental basis. The idea was developed by civil engineers into elaborate plans for a municipal setup. However, the city government turned it down.

JAY GOULD'S 500-year lease on Eads Bridge led to building of Union Station

Then Dr. Taussig, who had become president of the bridge and tunnel companies, suggested that the carriers pool their resources and do the job themselves. Why couldn't they own and operate these facilities for the benefit of all concerned through an association that did not pay profits or dividends? It was a radical concept for an age of cut-throat competition, in a railroad world dominated by the Goulds, Morgans and Vanderbilts. The roads took several years to think it over.

Finally in July, 1889, half a dozen carriers boldly joined hands with the bridge and tunnel companies in organizing the Terminal Railroad As-

sociation of St. Louis. These pioneers were the Missouri Pacific, the Wabash, the Ohio & Mississippi (now B&O), the Big Four, the L&N, and the St. Louis, Iron Mountain & Southern. A few months later the Merchants, a second bridge spanning Old Man River at St. Louis, was completed and put to use. This structure and the interests backing it were eventually drawn into the TRRA; and as time went on, other outfits joined up, one the Wiggins Ferry Company. Thus we see how the names of the three divisions originated. The Wiggins is the division on which river traffic is interchanged.

Since then two other bridges—the McKinley and the MacArthur—have been built across the Mississippi to provide additional traffic lanes; and more railroads have joined the original six, bringing the total number of member roads to fifteen.

"Without this unification," says President Watson, "St. Louis could never have reached its present position as one of the country's leading industrial, manufacturing and distributing centers."

And the Supreme Court of Missouri stated: "Suppose it were required of every railroad company to effect its entrance to the city (St. Louis) as best it could and establish its own terminal facilities; we would have a large number of passenger stations, freight depots and switch yards scattered all over the vast area and innumerable vehicles employed in hauling passengers and freight to and from those stations . . . The city would be cut to pieces with the many lines of railroad intersecting it in every direction."

The court declared also: "A more effectual means of keeping competition up to the highest point between parallel or competing lines could not be devised. The destruction of this system would result in compelling the shipper to employ the railroad with which he has switch connections, or else cart his product to a distant part of the city, at a cost possibly as great as the railroad tariff."

LET'S SEE how Union Station fits into the picture. After electing Dr. Taussig as its first president, the Terminal Association floated a seven-million-dollar loan—two millions for expansion, the rest going to Jay Gould for certain properties he owned or controlled—and began planning to build a new, much larger terminal to replace the already obsolete Union Depot.

On April 1st, 1890, the present site on the old Chouteau estate was chosen. The "end," rather than the "through," type of station was decided upon because no passenger trains go through the city.* All railroads, whether east-west or north-south, terminate their runs here and transfer their passengers to other lines traveling beyond St. Louis. Another reason for the "pocket" station, as it is sometimes called, is the city's topography, which confines its rail approaches to a narrow valley.

Architects from all over the United States were invited to submit drawings and plans, each with a sealed envelope bearing a distinctive emblem so that the winner's identity would remain secret until the award was made. Eight did so. The winner, whose device was a Eutruscan vase,

* Since July 7th, 1946, it has been possible for passengers to travel by rail between the Atlantic Seaboard and Texas and Oklahoma points without changing trains at St. Louis, due to an arrangement the B&O, Pennsy and NYC made with the Katy, Frisco and MoP, providing through service for coach and sleeping-car passengers.

proved to be a former railroad man, Theodore C. Link of St. Louis. He was made superintendent of construction, with control over the whole job.

Link chose Romanesque architecture as best fitted to convey the impression that the modern railroad was as much the means of entrance and exit to a city as was the bastioned gate of the Middle Ages. Union Station is, therefore, an elaboration of the feudal gateway. But before construction could be started, the vast area had to be cleared of several big industrial plants, including one of the city's largest and oldest breweries. Also to be razed were stores, warehouses, the stables and sheds of a horse-car line, and more than a hundred private dwellings, many of them substantial brick. Luckily, there was no housing shortage in those days.

Excavation got under way in '92. Twenty feet down were found rotted willow stumps, log cabins, and the hulls of primitive boats—under what had once been an arm of Chouteau's Pond. Numerous springs appeared suddenly as the work went on, delaying progress. However, the toughest job was dynamiting the massive foundation walls of the old brewery, beneath which the earth was undermined with a network of caves and vaults. These subterranean passages filled with water almost as soon as they were opened up. It is interesting to note that nearly a half-century later, in a World War I scrap drive, 200 tons of metal were taken from the Union Station sub-basement, most of it reclaimed from the ancient brewery's boiler and ventilating system.

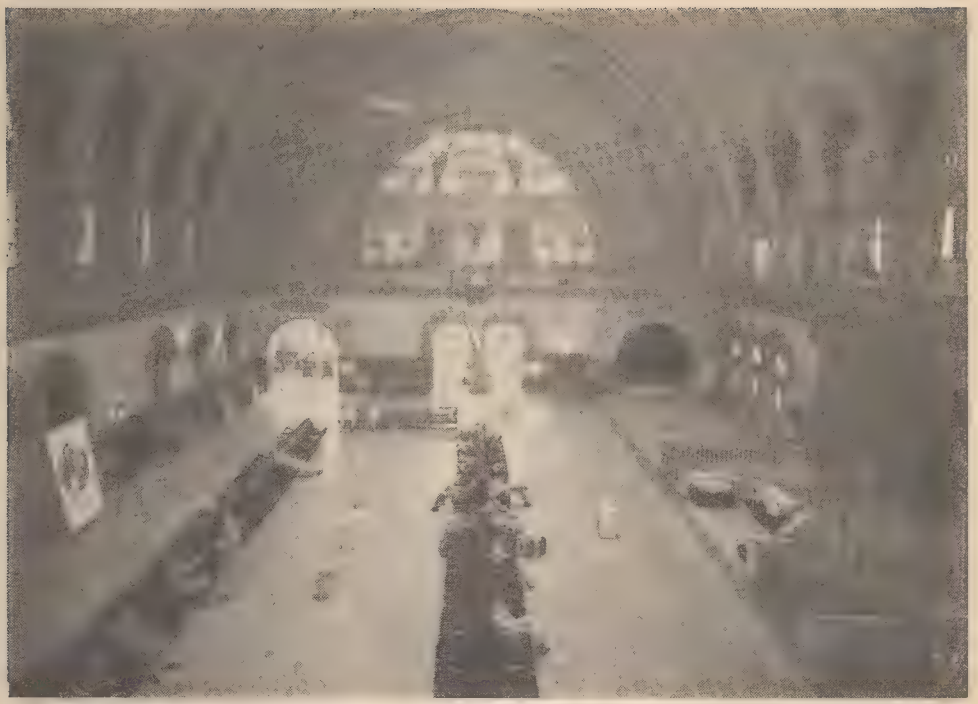
It required more than a year to build foundation walls for the station, and not until July 8th, 1893, was the cornerstone laid. Fourteen months later, on September 1st, 1894, the colossal building was sufficiently completed to be opened to the public. Train service began at 1:45 the next day with the arrival of a Vandalia fast mail, and has been carried on continuously ever since.

EAGER CROWDS thronged the terminal for dedication ceremonies and gaped in awe at what they saw. The edifice was indeed impressive. Its balloon-type trainshed, measuring 606 by 700 feet, was then the world's largest.

The grand hall, 76 by 120 feet, in which a giant chandelier blazed, is the second-floor waiting room. It bore more resemblance to an opera house or a magnificent library than it did to any station with which the dedication guests were familiar. In this room a feast was served that night. Wandering through it, the visitors admired the Gothic corridors with their gracefully vaulted ceilings, and the variegated marble from Italy and France, England and Belgium, Switzerland and North Africa, and from our own Vermont, Tennessee and Georgia.

A forty-foot arch facing the main staircase frames a stain-glass window. This latter portrays three girls in classic Greek attire: one of them, St. Louis, is seated symbolically between the other two, representing New York and San Francisco. The arch is popular as a whispering gallery—a whispered word may be heard clearly by anyone on the opposite side, quite some distance away.

The visitors inspected with approval the private Renaissance dining room, reserved for brass hats and



GRAND HALL, the station's second-storey waiting room, magnificent with Gothic arches and stained glass window

notables, and also the larger, oak-paneled public dining room. Both were, and are, operated by Fred Harvey. Today Harvey also manages a cocktail lounge, barber shop, two or three newsstands, a toy and gift shop, a book mart, and an emporium for toilet goods and perfumes —all under the Spanish-tiled roof of Union Station.

The clock-tower foundation is not connected with the foundation of the main building, although it appears to be an integral part of it. In fact, the whole steeple is isolated. When the station was erected, slip-joints were introduced between the tower and all abutting walls. Allowance was made for a settlement of half an inch, but to date the tower has dropped only a quarter-inch below the adjoining walls.

Very rarely is the clock tower visited by other than maintenance men. Your author managed to get special permission to ascend its narrow, winding, wooden stairway. It was an eerie climb in almost total darkness. The flashlight carried by his guide did not shed enough light to give a sense of security to anyone not familiar with the layout.

Much of the interior is occupied by a huge tank holding 15,000 gallons of water for the station's fire-protection sprinkler system. The clocks are run by electricity, though until a few years ago they had to be hand-cranked. There are four clock dials, each ten feet in diameter. Above them—just under the peaked roof—is an observation platform; and on the balcony all around it, pigeons make their nests, lay eggs and hatch their squabs.

Many experts regarded both the initial $6,500,000 cost of this station and its size as fantastic, but Dr.

Taussig and his associates believed the future growth of St. Louis would justify the expense. Even before 1894 ended, the 86-room Terminal Hotel—not included in the original specifications—was added to the west side as part of the overall structure. And ten years later, changes had to be made that almost doubled the station's capacity. These alterations were brought about by the Louisiana Purchase Centennial Exposition of 1904.

IT WAS the exposition—*Meet Me in St. Louis*—which really gave J. J. Canda his start. Mr. Canda is now passenger trainmaster at Union Station. He went to work there as a messenger in 1903, the year of the erection of Tower 1, the terminal's main interlocking plant; but his big opportunity did not come till April, 1904, when the tower was opened to aid in handling World's Fair traffic. J. J. C. qualified as a teleautograph operator and was assigned to the tower on its opening day.

The Exposition made heavy demands on Union Station as well as on all the roads entering St. Louis, still it did not catch them unprepared. Trainmaster Canda recalls that the thirty-two tracks then under the great trainshed were lengthened considerably to care for the expected trainloads of Exposition tourists. After the Fair got under way, a special shuttle service on TRRA and Wabash rails took passengers directly between Union Station and the Fair. The Wabash had an attractive white station on the Exposition grounds, and from it poured in a seemingly endless stream a high percentage of the Fair's visitors.

Nineteen-four was actually a double centennial. Besides the acquisition of Louisiana Territory from France, it marked the hundredth year of the steam locomotive on tracks. Among the very popular exhibits was the largest display of motive power ever seen up to that time.

Even after the Fair closed, the terminal tracks were not cut back to their original length. A quarter-century later ten new tracks were added, making the present forty-two. At the same time the concourse was extended, so it is now 708 feet long and 70 wide. Then in 1942, under the supervision of H. Austill, chief engineer, the station itself was renovated.

WABASH station on old St. Louis Exposition Grounds was convenience for shuttle passengers on TRRA and Wabash roads

The entire first-floor waiting room was enlarged and redecorated. Hard wooden benches of 1894 vintage were tossed out. A ticket office of modernistic design was constructed adjacent to the midway with facilities for sixteen

MURAL above the Terminal ticket office depicts the neighboring Eads Bridge and bustling St. Louis levee as they looked in the middle Seventies

ONE hundred thousand persons daily pass through Union Station's waiting rooms; 67,000 of them are travelers; rest, greet or see their friends off, patronize Fred Harvey's smart shops

OLD train gate was unsightly, with intimidating iron pickets

ticket sellers. Instead of the archaic bars that separated ticket clerks from the populace, it provided an over-the-counter arrangement.

Above the semi-circular office was hung a mural of a riverfront scene showing a TRRA train and the Eads Bridge. The painting is illuminated by hidden lights and a fine example of showmanship. And the grand hall or second-floor waiting room was also brought up to date retiled and equipped with leather-and-chromium-trimmed settees and writing desks.

Next came the task of tearing down the old, unsightly iron-picket fence, with its sheet-metal covering and its prison-like gates. In place of this monstrosity a partition of hollow gypsum tile was erected, which contains huge plate-glass windows and sliding doors of rift oak with circular glass panels. The new wall, completed in early '43, gives a clear view of the trainshed and its amazing line-up of crack trains. Like the old one, it helps to keep trainshed smoke and dirt out of the midway.

Together with the new revolving heat units that were hung from the roof trusses a few months later, this partition is a shelter against wintry weather. Live steam for the heaters is piped from a central power plant. This same plant also supplies steam for heating passenger trains stored in coach yards or standing under the trainshed, as well as Union Station and other buildings in the setup. Near it, you find the main electrical sub-station where electric current is transmitted and distributed for the many services required.

All through 1943 the streamlining continued. The midway was given a terrazo floor over the uneven and drab concrete which had been laid when Union Station was first built. Today's floor, in addition to being

PLATE glass windows and sliding doors dignify the new gateway

firm and level, is pleasing to the eye. And along the full length of the busy esplanade, comfortable benches of rift oak were installed for foot-weary travelers and those who had short waits for trains.

Wartime growth in passenger traffic plus new trends of popular taste made these improvements a necessity; but numerous other alterations were made at the same time. The Fred Harvey news-stands, for instance, were keyed to harmonize with the general motif and were relocated from the midway's center to along its north wall.

A NEW lighting system was installed over the entire 708 feet of midway ceiling. This consists of cold-cathode neon tubing behind ground-glass panels. It is arranged so as to provide two parallel continuous ribbons of bright dramatic effect in contrast to the dim glow it replaced. The midway thus lighted reminds you somewhat of a carnival, an impression which is heightened by the public-address system, with its loudspeakers suspended from the ceiling and occasionally blaring out information or requests.

The modernization project doubled the parcel room's capacity and relocated the parcel-check lockers for greater convenience. Nor was that all. With the war well under way, a new USO lounge and canteen were opened. Then the magic wand was waved over Travelers' Aid. The ladies' nursery was established there under Travelers' Aid supervision. Besides cribs for babies, mothers can find a milk bar where formulas are prepared and heated in sterilized bottles. Refrigeration also is available.

The local Travelers' Aid was founded almost a century ago by a bequest from Bryan Mullaphany to

help settlers on the westward trek to the "Great American Desert." Since then it has functioned with no letup, assisting bewildered folks regardless of their destination. An example of the help it renders was reported the other day by the GM&O. As the streamlined *Rebel* speeding northward from New Orleans flashed by a section gang near Percy, Illinois, a Negro woman passenger, possibly recognizing a wayside trackman, waved excitedly. A piece of paper fluttered to the ground and was carried in a flurry of dust down the track, in the wake of the vanishing train.

Some two hours later *The Rebel* backed into Union Station. Tearfully, the passenger approached Dan Bernard, the GM&O division passenger agent there, saying she had lost the ticket for her trip beyond St. Louis and had no funds to buy another. Bernard steered the woman over to Travelers' Aid, which loaned her the money she needed to continue her journey. Then the GM&O man wired the section foreman at Percy. As a result, the ticket was found and its cost refunded to the grateful passenger.

The job of dolling up Union Station continued. By March, 1944, a new, air-conditioned room had been built for the Reservations Bureau and Telephone Information. More than one hundred men and women are employed in these activities. The bureau has four tables, each with eight telephone lines and a series of car diagrams and other gadgets which together simplify the problem of pooling Pullman, coach and chair-car reservation service. If you go to any railroad ticket office in St. Louis for a reservation, that office must clear it through the main bureau in Union Station. Telegrams exchanged over railroad-operated wires are shot directly through pneumatic tubes between the station telegraph offices and the Reservations Bureau.

For Telephone Information there is one long table with a dozen working positions and telephone wires. Details on the arrival and departure times of all passenger trains scheduled to enter or leave the big terminal come to this room over a teleautograph machine, and are given out in reply to telephone inquiries. Information clerks are also furnished with timetables, the *Official Guide*, and pamphlets itemizing fares on all trains that use the station.

While the rest of the mammoth structure was undergoing all these improvements, the Fred Harvey restaurants and lunch room, which served nearly two and three-quarter million hungry travelers in 1943, were streamlined with new floor covering, new tables and chairs, new fixtures. Not only that, but various other Harvey concessions were regrouped into a shopping center. This layout was completed in time for the pre-Christmas season of '44.

Other changes included new offices for the stationmaster and the general baggage agent, a more efficient train bulletin board, with a Train Information Bureau located beside it, modernized toilet rooms, and even a better taxicab concourse.

ALTOGETHER, the cost of remodeling the Union Station amounted to nearly twice what had originally been spent on construction. Architects pronounced it the most thorough renovation job ever carried out by a major railroad terminal. Few changes were made in the rooms on the second, third and fourth floors

UNION STATION, since March, 1944, has been clearing ground for all railroad reservations made in St. Louis

TELEAUTOGRAPH machine handles details concerning arrival and departure of all trains

WOODEN REPLICA of Golden Anniversary cake built by Anfenger Advertising Agency

PRESIDENTIAL SPECIAL bearing Truman and Churchill was B&O on arrival in St. Louis; MoP on departure

occupied by the Terminal Railroad Association, the Pullman Company, and the Association of American Railroads.

The face-lifting of Union Station was a prelude to its golden anniversary. On September 1st, 1944, a wooden replica of a birthday cake standing eighteen feet high, built by Anfenger Advertising Agency and adorned with fifty candles and a few enlarged photographs—was set up in the midway near the Cotton Belt train gate, an object lesson to the 100,000 men, women and children who stream through the station daily. Union Station had been performing a great job for half a century. The 67,000 travelers who passed daily through the Gateway with their friends might pause for a moment to admire the birthday greeting and give silent tribute to the fifty years of service well done.

With so many people involved, and the connecting trains of a dozen and a half railroads, even a bus driver could understand why the big terminal needs ample, bright, attractive waiting rooms. During 1944 nearly one and one-half million railroad tickets were sold in Union Station for roughly fifteen million dollars. In the following year both figures jumped about seven percent.

Fortune magazine once computed how many tons of chewing-gum were scraped up from the floors of Penn Station, New York, in a given period. We can't cite the St. Louis chewing-gum statistics, but the *Missouri Pacific Lines Magazine* tells us that "persons who use Union Station drop on its floors or into its trash receptacles some fifty tons of old newspapers, paper sacks or lunch boxes every twenty-four hours." Stationmaster Ray O'Neill challenges this figure with the air of a man defending his pet airedale. He doesn't be-

lieve so much junk accumulates in the twenty acres which he bosses.

More to the point, however, is the average of 177 carloads of mail per day that go into or out of Union Station. And still more significant is the fact that in 1944 some 687,000 passenger cars were wheeled under the trainshed in both directions. In 1945, about 714,000.

When President Truman and Winston Churchill visited Fulton, Mo., in February '46 they went into St. Louis on the B&O and out on the Missouri Pacific. The presidential special included Number 1401, the famous converted passenger and baggage car reserved for our Chief Executive. This is equipped with the most modern radio, telegraph and telephone devices. From it the President can: telephone to any house or to any radio-equipped automobile or other vehicle in the United States; carry on a radio teletype conversation—in virtually unbreakable code—around the world at a rate of one hundred words a minute; send and receive messages to and from ships at sea; and send and receive telegraph code messages.

The Truman-Churchill special did not go into the main or old section of the station but was serviced on track 4 of the new addition known as "the Garden," from which the public was temporarily barred. Fifteen minutes after arriving it left. This was similar to the procedure followed the last time President Franklin D. Roosevelt's train came through St. Louis. While the B&O engine was being cut off and the MoP put on, the train was inspected and given water, ice, etc., on a track just behind the main interlocking tower.

On an earlier occasion F.D.R.'s special rolled right into the station. It was expertly piloted by a Terminal trainmaster who boarded the rear platform at 14th Street, eased her in under the trainshed, and stopped on a dime six feet from the concrete bumper at tracks' end. There it was possible for F.D.R. to step from the special into an automobile awaiting him on the wide station platform.

ONE of TRRA's numerous yard goats, Number 308, does her share in work of switching almost fourteen hundred trains per day

MoP'S Number 32, commuter local, is only train that regularly enters the Station peak-end first

UNION STATION is called a "pocket" terminal because, with but one exception, all regularly scheduled trains enter it backward. Those from the east pull west of the station before backing in; those from the west head east before backing in. This arrangement has little or nothing to do with the smoke nuisance under the trainshed or with shortening the distance that passengers must walk along the platform. The real reason is that if the trains ran in peaked-end first, the usual head-end revenue cars—baggage, mail, express—would be spotted inconveniently for loading, to say nothing of the congestion of trucks and trailers that passengers would have to walk through enroute to the gate.

The lone eagle is Missouri Pacific's Number 32, a commuter local which enters without reversing because it has no such equipment between the engine and the coaches. Number 32—Number 35 on its outbound nightly trip—makes a 68-mile round trip daily except Sunday between St. Louis and Pacific, Mo., with the usual suburban type coaches. The average number of passengers comprises four hundred inbound, five hundred outbound. The extra hundred at night is attributed to the custom of women shoppers leaving home in late morning or afternoon and boarding Number 35 for the return trip after store hours.

On occasions when the Illinois Central's five-car *Green Diamond* was pulled by Diesel instead of steam, it also was permitted to head into the station rather than back in, but that is no normal practice.

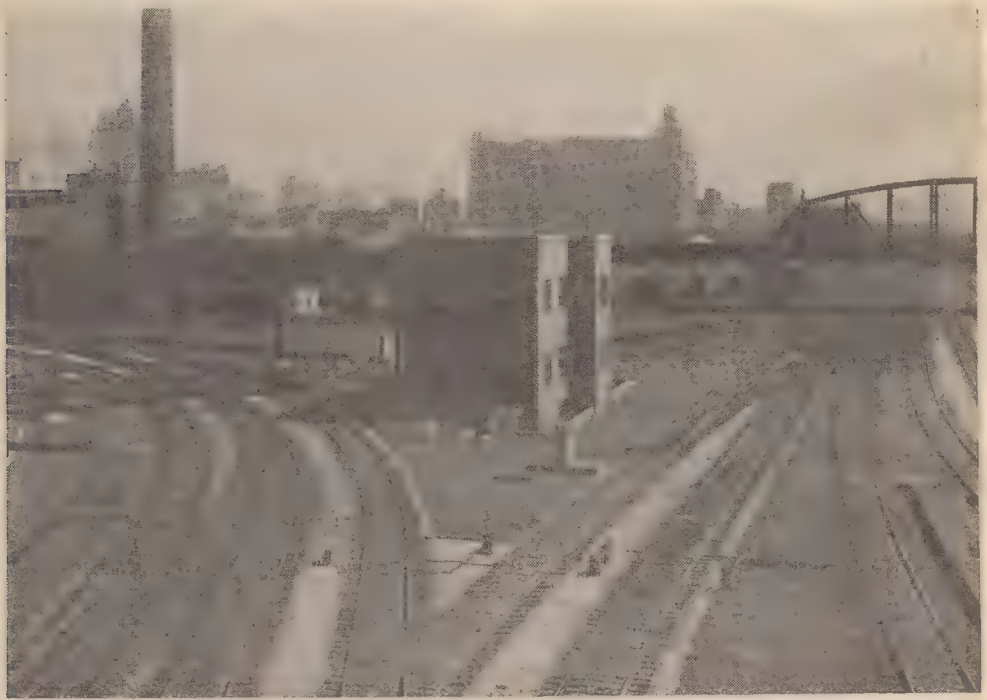
Passenger trains, like pigeons, come in flocks. The biggest flock starts entering Union Station at about 7:30 a.m. and keeps winging

its way in for the next hour and a half. Around nine the morning peak tapers off. After a lull comes the noon rush; then another flock and a breathing spell again; the late-afternoon flock, another easing off; and finally it seems that everything wants to pull out at midnight. Between 8:30 p.m. and 11:30 p.m. about ninety percent of the express hauled out of Union Station is loaded onto evening express trains. The bulk of this goes out at night or just after midnight, so as not to inconvenience the passengers.

Traffic moving over the TRRA is governed by sixteen interlocking towers. By far the most important is Number 1, Perry Tower, strategically located at the point where all forty-two passenger tracks curve into the trainshed. It was named for retired James M. Perry, who worked around the station and yards from 1896 to 1941, mostly as passenger trainmaster.

Perry Tower is a new, $350,000 brick structure, air-conditioned and fireproof, with an electro-pneumatic machine said to be the largest of its type in the world—the nerve center and brains of the entire station. The tower has two stories and a basement equipped with shower baths. Plateglass thermo windows on all sides gives a clear view of the tracks that surround the tower as the ocean does a lighthouse. Window cleaners keep them immaculate.

The men on duty there, all with plenty of "whiskers," direct the movements of between 200 and 220 passenger trains a day into and out of the big shed. Eleven men are needed for the morning and evening peak periods. This force includes J.



PERRY, chief of the sixteen interlocking towers, acts as brain center for iron ganglia branching throughout the Terminal yards

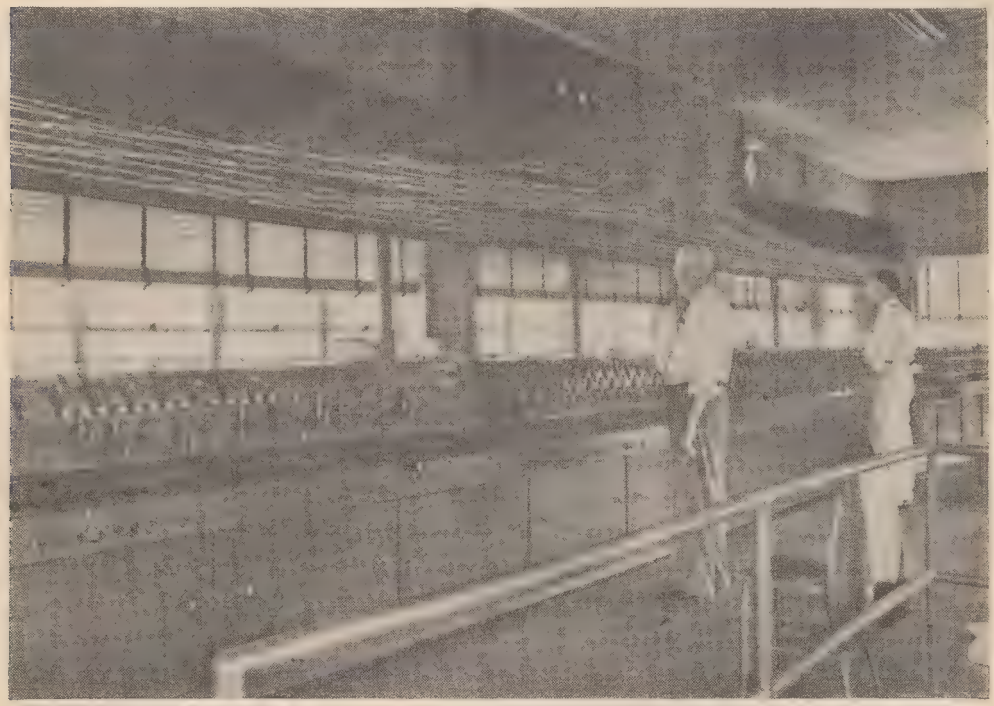
J. Canda, passenger trainmaster, who is responsible for all trains passing through the interlocking plant; the general train director, the chief train director, two assistant train directors, four levermen, one teleautographer machine operator, and one assistant power operator. (On the graveyard track, with traffic at a minimum, five men complete the force.)

THOSE ELEVEN custodians of passenger safety who preside over the rush periods remind you of a football team. The line-up is a bit different. Two quarterbacks (train directors) call signals. Four men in the backfield operate the control board, while the other five sit on a raised platform, as the quarterbacks shout orders from the floor.

When a train director wants to order an end run such as moving a New York Central streamliner out of the station he might call out, as in a football game, "26—70—55." The first number is the outbound train track, "70" the lead track, and "55" the down track for departure. A leverman repeats the signals. He knows instantly the combination of switches to be thrown for that move.

From one signal you could make 165 different combinations. The towermen try to see that the regular inbound and outbound trains use the same tracks every day, as shown on timecards, so mail and express trucks can be assigned in advance to meet them..

The control panel is a blackboard eighty-four feet long with an enormous silver diagram of the forty-two-track gridiron leading into the station as well as its spurs, branches and offshoots. Along each track on the diagram, lights are spaced, corre-



INTERLOCKER PANEL. Levers operate switches and signals for forty-two tracks curving into trainshed

sponding to sections of the tracks themselves. Here, before a formidable battery of 304 switch and signal levers, the football players go into action. As lights flash rhythmically red and silver, and numbers turn to gold, huge caterpillars on wheels crawl into or from the shed. There is no confusion. Everything runs like clockwork. The setup is as near foolproof as human ingenuity can make it. No switch can be thrown until the track is clear.

TRAINMASTER J. J. Canda explains operations of train director's panel to D. B. Foster, right, Katy passenger agent

The tower is not ordinarily open to the public. The few outsiders who manage to visit it may be surprised to see lunch pails, salt and pepper shakers, tumblers, cups and saucers, and binoculars strewn over the broad top of the control board that stretches the entire width of he second floor. There's a pot of coffee always simmering on the electric-plate stove. The reason is that the men work eight hours straight, and mealtime is when they can grab a bite of sandwich or mug of Java in between trains.

Like the referee whistling in a football field, a train director operates air whistles at Perry Tower. *One* sharp blast means stop; *two,* tell a man to go ahead; *three,* back up; *four,* switch or signal has failed (they sound on various bridges where emergency repair men are stationed during rush periods); *fire* indicates that the out-of-order equipment is okay again; *six* sharp blasts call out trackmen.

A desperate situation arose July 22nd, 1940, when Perry Tower's predecessor, "Z," first used for the World's Fair traffice in 1904, was destroyed by fire of undetermined cause. Starting in the basement at 4:45 p.m.—just as the afternoon rush was starting—the blaze spread rapidly. Eight towermen, trapped on the second floor, escaped out a window and down a ladder. Several fire extinguishers were located there; but the men had no time in which to use them.

A fire hydrant fifty feet away had been fitted with lefthand threads to prevent tampering with it. In the excitement, its operating stem was twisted off and the hydrant became useless. Nor was the city Fire Department much help. The nearest city fireplug stood about a thousand feet from the flaming tower. Before the smoke-eaters could turn on their hoses, the building with its costly equipment, including very intricate wiring, had already been gutted.

RELAY STATION at East St. Louis, which serves twenty-three roads to Chicago's thirty-three, Kansas City, Mo.'s sixteen, is gateway for roads east of the Mississippi

The tower, with its two hundred sixty-two working levers, had controlled a layout of ninety-seven single switches, sixty double-slip switches, five movable-point frogs, two hundred ninety-six signals, forty-two station tracks and six main-line tracks. To have this control suddenly snuffed out was little short of catastrophic. The vigor and promptness with which the Terminal Association rallied its forces to meet the emergency is a modern saga of rail history.

EVEN WHILE the flames were still raging, hurry calls were sent out for extra switchmen, signal maintainers, dispatchers and other employes. Within a few hours they were moving trains under a system of hand and lantern signaling that had passed out there thirty-six years before. With the tower gone, eight trains were stalled in the shed. None of the eastbounds could leave until after 7 p.m. because of the additional factor that they were blocked by several long lines of city fire-hose that had been laid across both eastbound wyes in a fruitless effort to save the tower. Incoming trains were kept out.

The large number of trains due to arrive during the first few hours after the fire were stopped and unloaded at the Washington Avenue, Tower Grove and Delmar Boulevard stations. Those that had already reached the yards disgorged their passengers at 12th Street. Taxicab fleets took the people from those points. Friends and relatives waiting at Union Station were notified where to meet the travelers.

All interlocking signals were, of

course, out of service. The switch and movable-point frogs operated by compressed air had been controlled by electro-pneumatic valves. By resorting to the "armstrong" method it was possible for men assigned to frogs and switches to work them, since the air-compressor plant had not been affected by the fire.

Three MoP morning and three evening trains were annulled temporarily, but usual service was maintained on the distinctive Number 32-55. Routes were set up. Switchmen rode or walked ahead of each train, inbound and outbound, to guide it over its assigned tracks. They examined switches and shouted orders to other switchmen on how to line up the rails. Megaphones were used as soon as a supply became available. As night closed in, floodlights were installed, while laborers worked feverishly to clean up the fire debris.

Before 8 p.m. the shed was empty of outgoing trains. An hour afterward those scheduled for later departure had been placed on station tracks and were receiving passengers. Shortly after midnight all trains due to leave that morning were spotted on shed tracks so that switching them would not delay the inbounds.

To avert serious errors, when a switch was thrown for any route it was first wedged into position with a wooden block until the train passed. But as the men became more familiar with their duties, this safeguard was discarded. By working all night, trouble shooters strung wires from the stationmaster's office to the open-air headquarters of dispatchers and train directors. The phone service was extended to various groups of switches, and then a public-address system with loudspeakers was set up to facilitate still further the issuance of orders. Where necessary, trenches were dug to cross under tracks with telephone or other wires. Elsewhere they were merely laid on the ground.

On the night of the fire nearly two hundred men, besides the tower force, were hired to transmit orders, line up switches, pilot trains, and the like. Many of them worked twelve hours at a stretch. This number was gradually reduced as order emerged from chaos.

The following day a frame shack with a tar-paper roof was erected to house dispatchers, train directors and their equipment. This shanty became so unbearably hot under the July sun that a Pullman air-conditioning device was borrowed from the Frisco Lines to cool it. But before the tower ruins ceased to smoulder, President Watson had telegrams sent out calling the TRRA signal committee, chairmanned by MoP Signal Engineer P. M. Gault, to meet the next morning and make immediate plans for building a new tower to replace the old one. Later he announced:

"Regardless of expense, we are making every effort to keep passenger trains moving on schedule. Each hour brings refinements to the hand-switching plan. Within a few days the traveling public will scarcely be aware of the disaster which threatened a serious tie-up of traffic."

Fortunately, the Pennsylvania had on hand a new 33-foot interlocking machine, which it had stored during the depression years. The Pennsy sold it to the Terminal Association, thus shortening by several weeks the period of hand operation. When the new tower, equipped by the Union Switch & Signal Company was dedicated a few months later, a special

train operated out of Union Station carried a galaxy of officials and invited guests, including rail-photographer Lucius Beebe dressed in engineer's overalls, to the tower for the celebration.

A TERMINAL exists for the purpose of making and breaking up trains and sending them out. This task at St. Louis involves an interchange of about 12,000 freight and approximately 1900 passengers cars a day, the highest passenger record being 2397 in a 24-hour period. These must be classified as to rerouting and destination, and dispatched to all points of the compass. The interchange of each car means two movements—one in, one out. Freight service yields about ninety percent of the Association's total annual revenue.

The trainmaster's office gathers all information relative to making and breaking up all trains in the district. This data is phoned to the men concerned in the operation. Every hour a white sheet of paper is delivered to the tower, listing civilian train movements for the next hour, with pink slips for troop specials.

The limit for inbound passenger trains at Union Station is seventeen cars. The trainshed could not accommodate a longer one. Occasionally the Pennsy's *Spirit of St. Louis* and *The Jeffersonian*, both eastbound and westbound, have up to seventeen cars when pulled by a T-1, class 5500, the largest steam passenger engine that runs into St. Louis.

Restrictions on southbound trainlengths depend upon the time of departure. The roads themselves also impose such restrictions because of the power used. The station's ten newest tracks which are equipped with umbrella-type sheds hold an average of eighteen cars apiece, based on standard car-length of sixty-eight to seventy feet; but only fifteen cars can be accommodated under these sheds. Capacity of the other thirty-two tracks ranges from ten to fourteen cars apiece.

Both freight and passenger trains use the seven tracks behind Perry Tower. During the war four of those tracks were given over to the servicing of troop specials. Steam connections were employed to heat the trains in cold weather while they were being serviced. Troop movements then increased to such an extent that some of the through trains had to be sent into the station for servicing, and watering facilities were added to certain tracks in the big trainshed. Still other troop specials were serviced in the area known as Jefferson Yard.

Union Station, with 350 miles of steel, is reputed to have more trackage than any other terminal. Somewhere in the many yards, section hands are constantly at work replacing worn-out rail. In very cold weather smudge pots are kept burning at all switch points to prevent them from freezing. All summer long ice-water gushes from drinking fountains spotted throughout the yards—a modern convenience that oldtime switchmen never would have expected this side of the Big Rock Candy Mountains.

Lingo of the rails is commonly heard in this area. Tracks 1 to 1D are called "the Garden," and 11 to 42 "the Main Shed." When you direct a cut of cars into track 57, you yell, "Poke 'em down 57!" Heavy handling is known as a "corpse." Through equipment that does not go into the trainshed at all carries the

handle "passing cars." The section of tracks immediately in front of Perry Tower that is used by virtually all trains in and out of the station, is called "the Grand Crossing." Crossovers are generally referred to as "puzzles," and a series of red signals, a "strawberry patch." Troop sleepers are "jeeps", a new one for the slang vocabulary.

A "cab run"—there are half a dozen every day—is a train which the TRRA operates with a four-man crew for the sole purpose of transporting employes to their jobs at various points in the yards and bringing them back to the station. No fares are collected on cab runs. The train usually consists of a Diesel "goat" and a special type coach. This type has two rows of wooden benches parallel to the car's sides and is equipped with a coal stove at each end for winter warmth. There are two small oil lamps, apparently intended for illumination. However, when your author went along on a cab run while inspecting the yards, the coach remained in utter darkness during the six minutes or so that the train took in scooting through the TRRA's only tunnel, nearly a mile long.

The Terminal Association also operates a shop train, four or five times daily, taking employes to the Brooklyn shops and back. Those shops handle the overhauling of both steam and Diesel power as well as other mechanical requirements.

BATH for Katy car. She's but one of thousands of pieces of equipment requiring daily wash-down in Terminal yards

THE locomotive service yard and the roundhouse lie east of Perry Tower. To the west on sidings, Pullmans and coaches are cleaned. There is a large coaling station in the layout, and four coach yards. The one at 17th Street is the express coach yard; the one at 21st is used for making and breaking up Alton, GM&O and B&O trains; the Jefferson Avenue Yard is used for Katy, Wabash, Frisco, Rock Island, C&EI, Cotton Belt, IC, and Nickel Plate trains, the one at Rankin Avenue for the MoP, Big Four, L&N, Burlington and Pennsylvania.

Aside from the Association's 4500 employes, most of the individual roads have their own passenger-car yard servicing departments. The cost

to each road is based upon the number of cars using the yards.

The TRRA has two wrecking crews, each with a big hook, one on each side of the Mississippi. The one on the west bank handles local calls only, because it is in the station district. The other is for derailments originating on the east side, or on the first division out of St. Louis for roads that have no wrecker of their own, or to be rented to such carriers as may need it. Union Station has never had a really bad wreck. The wrecking crews spend most of their time on repair jobs, going out with the big hook only in emergencies.

The Association also owns a revolving-brush snowplow, pile drivers, and bridge and building equipment. It boasts sixty-five assistant yardmasters and several assistant yardmasters, but no G.Y.M. Seven bridges cross the yards—at 12th, 14th, 18th, and 21st streets, and Ewing, Jefferson and Compton Avenues. The total investment in all TRRA facilities, according to President Watson, is in excess of seventy million dollars, while local and Federal taxes on the properties run around a million a year.

A marker indicating the site of old Union Depot, on acreage once possessed by the man who founded St. Louis, is attached to the Terminal Railroad Association's freight office at 12th Street viaduct and Poplar Street. If that ancient Frenchman, Auguste Chouteau, could revisit today the scene of his quiet mill pond with its willows and ducks and slowly-turning water-wheel, he would not recognize the place.

Across from the Terminal is Alco Plaza—beauty spot of the entire city, as tens of thousands of travelers annually will testify. Seen from the foreground, with the bastioned fortress of the Station in the rear, the statuary fountain seems the proper approach to some old castle. The work of Carl Milles, a Swedish sculptor, the fountain has symbolic significance. The two main figures represent the Mississippi and Missouri rivers in their union north of St. Louis. Around them are grouped the smaller figures of water creatures, symbolic of the many tributary streams which merge with the dark flow of the two mighty rivers. It is interesting to recall that said Missourians were shocked by the nude figures and that considerable controversy developed over the acceptance of the fountain. Today, it is considered one of the outstanding sculptuary landmarks of the West. Indeed, its elegance and beauty, combined with the castle-like appearance of the Terminal, might remind the Frenchman, if he were alive today, of the country from which he came.

HAIL AND FAREWELL! For many Rio children, this was the first and last glimpse of narrow gage sleeping cars, unknown on the line since 1899

MIXED TRAIN DAILY

A RAILFAN trip to stimulate envy in the excursionist's bosom was recently arranged and carried out over one of the country's collectors'-item railroads. Aboard two miraculously maintained business cars dating from the early seventies, Lucius Beebe and Charles M. Clegg, in search of pictorial and editorial material for their *Mixed Train Daily, A Book of Short Line Railroads,* slated for publication by E. P. Dutton in 1947, were conveyed over the entire mileage of the Rio Grande Southern Railroad. Barring unforseen eventualities, the line will shortly be abandoned.

Officially an inspection trip by A. E. Perlman, chief engineer of the D&RGW, with Beebe and Clegg as specially invited

ENTHUSIASTS Beebe and Clegg examine a relic of the San Juan's precious ore with Mrs. Pellet

RGS Number 20 once graced the Florence & Cripple Creek. Now, with white flags on her smokebox she rolls across the meadows above Dolores, her consist—"the last train to yesterday"

SHOPPERS SPECIAL. Few gifts from the Great White Father have seemed as strange as the Galloping Goose. Stop here is Vance Junction

paying guests to conform with I.C.C. regulations, the trip attracted widespread attention. Its details were carried on the wires of the news associations not only because of its luxurious overtones, but because it was the first time a steam passenger train with sleeping cars had been run over the narrow gage rails of the Rio Grande Southern west of Durango since 1899. In addition, it might very well be the last steam passenger train ever to run over the entire length of the road.

The affairs of the Southern are admittedly in precarious case. It has never paid a dividend since it was built by Otto Mears in 1890 and, as this is being written, its life hangs on the slender thread of a mail contract which is renewable every six months. Freight from the mines of Telluride and the San Miguel Mountains has been in steady decline. Since the middle thirties passengers and mail have been carried daily over the road's 162 miles in gasoline-powered rail vans known locally as "Galloping Geese."

The excursion was conceived in the opulent style of the well-to-do miners and tourists who thronged the narrow gage in the nineties. The cars were lit by solid silver coal oil lamps mined long ago in the San Juan mountains. They were heated by Baker heaters and furnished in period design with Turkey carpets, silver plumbing fixtures, old fashioned ice boxes and kitchen equipment. Brass beds graced the master staterooms occupied by Beebe and Clegg. The menu included rare viands: steaks, pheasant, caviar, foie gras and antelope filets, complemented by champagne, Madeira and vintage cognacs. Not unnaturally the party wore evening clothes to dinner.

The two business cars B-2 and B-7, dating from 1879 and 1880 respectively, were included in the consist of the *San Juan,* the D&RGW's daily passenger train from Alamosa to Durango. From Durango they passed over the three-foot rails of the Rio Grande Southern in mixed consist, running by way of Hesperus,

Mancos, Dolores, Rico, Lizard Head, Trout Lake, Ophir, Vance Junction, Telluride, Placerville and Dallas Pass to Ridgeway. At Ridgeway they were taken over the narrow gage Ouray Branch of the D&RGW to Montrose as a special. The entire passage required three days, with cars being spotted for the night at Durango, Dolores and on the six-mile spur track that runs up to the town of Telluride.

The mixed train from Durango carried half a dozen cars of lumber, mineral concentrates and merchandise, an RGS caboose and the two business cars. It was powered by RGS engine Number 20, originally built by Schenectady in 1899 for the long vanished Florence & Cripple Creek. Out of Rico it was powered by a leased engine of the D&RGW.

Entire populations greeted the special at Dolores and Rico. At the latter stop Mrs. Elizabeth Pellet, wife of a local mine owner and once instrumental in securing from the Federal government a loan of $65,000 which saw the Southern through the war, met the travellers with a group of Indian braves who performed ceremonial dances and presented the well-known railroad historians with gifts of precious ores and other souvenirs of the San Juan.

At Durango a formal dinner with fresh caviar, pheasant and champagne on the menu was served for A. P. Camp, leading banker of the San Juan region, who has been of material assistance to Beebe and Clegg in their researches in Colorado history.

As the train was carrying white and maintained no schedule, it was stopped at the convenience of its passengers for pictures and to see the sights. Numerous pictures later appeared in the Denver press, but a brisk snowfall made shots of the celebrated Ophis trestles impossible. If, as the newspapers called it, this was a "last train to yesterday," it accomplished its farewell trip in a style to put a fitting period to the legend of the world's most beautiful, lonely, most celebrated and most impracticable railroad.

STREAMLINED Goose at Dolores, pilot a-quiver to clear the yards before the special pulls in

NOSING out on the long trestle just below Lizard Head, D&RGW Number 452 in the lead. Two narrow gage business cars trail a hopper of mineral concentrates, a car of finished lumber, and a caboose

Part IV

Narrow-Gage Glory Days

By GILBERT A. LATHROP

THE PEAK of high water hit the Denver & Rio Grande narrow gage each year between June 1st and June 15th. That's when the sun melted the snow banks left by winter on the timberline mountain ranges north and east of Gunnison. The run-off of floodwaters is a yearly event, and generally rises to about the same level. But 1921 was to prove very different.

The winter had been severe; more than the usual snow had fallen. When spring came, the freezing weather continued and there were occasional snow flurries. By the middle of May, only tiny green tips showed on the cottonwood buds. They

Not For Years Has a Passenger Whistle Stirred the Echoes in Black Canyon

were not in full leaf by the first of June.

Then suddenly the weather turned warm almost overnight. Within a few days the Tomiche, the East River and the Taylor, all were pouring roily floods into the Gunnison. The record high water mark was reached, passed, and still the streams continued to rise. We got the first intimation of what was to come, when the wagon road west of town went underwater.

About the same time the double-span steel bridge over the Gunnison—originally built by the old South Park Railroad and later used by the D&RG—was cut off on both approaches. The center sandstone pier sagged and settled nearly twenty inches before it stood firm. A work train was rushed up there, and a rip-rap of logs and boulders was hastily constructed to deflect the raging torrent.

Yet this was just the beginning. In the Black Canyon, the river was cutting at the right-of-way in a dozen places. Another crew was hurried down there with all available men to try to check the damage. Jean Mahoney was conductor on this train; Gower and I, the brakemen. We took a half dozen flatcars, an eight-car B&B gang besides every section man we could muster. Mr. Patton—the road-master who was still sore at us for swiping his bottle of bootleg hootch sometime back—went along in charge of the whole outfit.

Down at "The Falls" in the canyon, where the Gunnison dropped almost a hundred feet in the same distance and

the railroad grade was steepest, the river was simply throwing itself at the chunks of granite blasted from the walls during construction, which were now holding up the roadbed. You could hardly make yourself heard above the tremendous roar. From convenient places close to the track, we loaded the flatcars with boulders and hauled them to the falls where we dumped them off.

About the time the last rock splashed into the swollen river, Jean hooked up his telegraphone to get in touch with the dispatcher. He talked a few moments, then disconnected the telegraphone and hustled over to Patton.

"The dispatcher just got a report from the Lake City branch," said Jean. "The water's higher than it's ever been. He says to load all men we've got, pick up the outfit cars in Sapinero and shove them ahead of us toward Lake City."

We backed to Sapinero where we turned our engine on the wye. Next we dropped the flats onto the passing track, coupled to our caboose and headed against the eight cars comprising the B&B gang. Just then Jean came out with running orders and we were off on one of the most unusual bits of railroading I've ever seen.

HEADING off the main line at Lake Junction, one mile west of Sapinero, we crossed the raging Gunnison on a steel trestle, rounded a sharp curve through a deep, granite cut and nosed onto another steel bridge across the Lake Fork. That stream was up to within six feet of the bottom girders. Logs, ties, timbers and uprooted trees sailed past on the muddy waves. Harvey Gower rode the point, while I was halfway back toward our engine. Jean was on the roof of the car next to our kettle. In this way we could get a quick signal to our engineer in case we found the track washed away.

Our speed was less than ten miles an hour. Lake Fork Canyon was crooked, and the roadbed was not far above the surface of the river. In spots the waves lapped at the ends of the ties.

By this time it was afternoon and a hot sun was beating down on us. We finally grumbled out of the canyon at Madero, took a tank of water and moved on. At Gateview the road crossed the river again and followed the north side of the narrow valley. Here, the next dozen miles of track stood high above the gully of the river and we were able to make better time.

About 3 p.m. we came in sight of the high bridge, the one I've mentioned before. The top looked okay and we were all for proceeding ahead. But the roadmaster stopped us.

"We'd better take a look before venturing out on it," Patton decided.

We walked forward to where we could look into the deep gorge below. The sight was enough to take your breath away. A dam formed by the drifting timber, trees and rubble was banked up against the bottom stringers; and leaping, white-capped waves were smashing themselves against the barricade in sullen fury.

"The whole thing's liable to go out any minute," said Jean, after staring down at the Gunnison for several moments.

Patton shook his head. "I don't think so. I believe it's safe to cross."

I stepped out on the structure. It was quivering as though the relentless beating of the flood had made it firm as jelly.

"It don't feel none too solid," I shouted, and moved back onto firmer ground.

Patton summoned the B&B foreman. That worthy looked the bridge over, walked across it and returned. He shrugged.

"I guess it's safe to take a chance," he told us. "I'll unload my men."

As the foreman strode back to the train, the rest of us stood there fascinated by the foaming waterworks. Each seemed occupied with the problem of whether we should risk taking the train across. While I wondered about that I was certain of one thing.

"I'm sure as hell gonna cross by hand," I declared.

Jap Berryhill, our engineer, had plenty of guts. Jap was a darned good runner

and still carried the scars of a wreck back in 1916, when a snow slide overturned his engine and he was badly scalded. But the accident hadn't bothered his nerve any. "I'll put 'em over," he told us.

We all walked across the structure ahead of the train, and waited on the far side. It was a pretty tense moment. Patton gestured Jap ahead, and the hogger pulled his throttle out. The B&B gang cars came first, then the engine, followed by the caboose. Jap held them to a slow walk.

Everything went okay until the engine came to the center of the span. Her weight caused the structure to settle almost a foot. We could see the whole thing move; and as it moved, it slowly bent out of line. Yet Jap never faltered in his slow pace. After what seemed an age, the outfit cars rolled on to solid ground. The engine, and finally the caboose rode safely behind.

All of us looked at the bridge. It sagged in the center, and instead of being straight, it was a good eighteen inches out of line where it had shifted.

"Take a look down there!" shouted the B&B foreman. He pointed below.

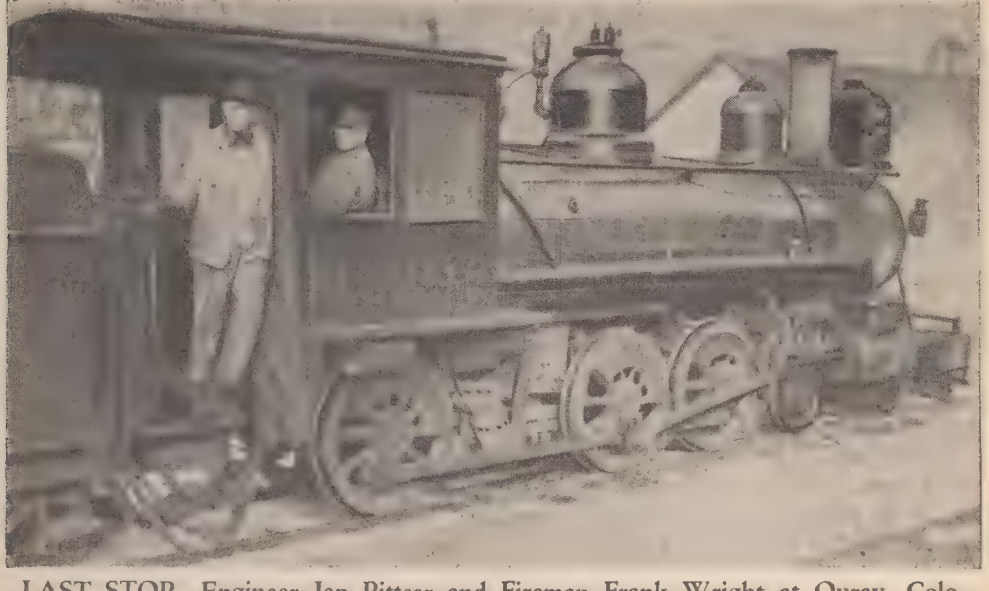
The rumble of the train above had dislodged the great driftwood dam. The barrier was breaking up, moving into the swift channel between the piling. We stood frozen, watching silently while the waters carried away the enormous mass of rubble bound in against the understructure.

"She held!" breathed Patton, as he mopped sweat from his forehead.

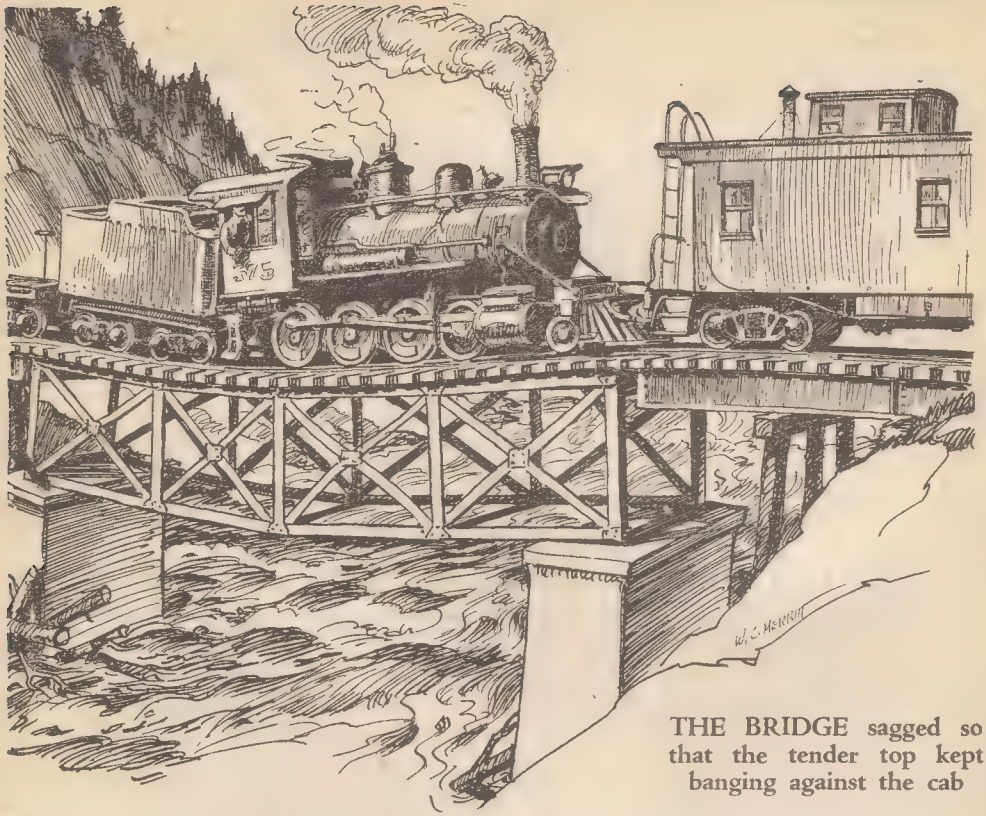
In a few moments, we climbed on again and proceeded, dropping down the short hill into the Meadows at Baker's Ranch, jogging along over short bridges that barely held above the surface.

REMEMBER the horseshoe formed by the Lake Fork where I'd enjoyed the great trout fishing, and the two railroad bridges? The west bridge was still intact, though the river was slapping the ties of it. The east one, too, was solid enough. But the fill on the far side of the latter was washed away, while the fill between the two was undamaged.

After a short conference, Patton and the B&B foreman decided to shove the outfit cars across the first bridge and leave them between the two structures. In this



LAST STOP. Engineer Jap Pittser and Fireman Frank Wright at Ouray, Colo. terminal in 1912; their passenger run was discontinued in 1930's



THE BRIDGE sagged so that the tender top kept banging against the cab

way the gang could do what they could to save both. Jean cut in his telegraphone and asked the dispatcher about it. The DS said it sounded like a good idea and told Jean to return to Sapinero with his caboose, to continue fighting the flood through Black Canyon.

We rode the gang across the first bridge, set some hand brakes and left them. By this time it was close to 4:30 p.m. All we had to do was back the thirty miles to Sapinero, but it would be dark long before we got to Lake Fork Canyon. Our engine had no back-up headlight, so there was no use switching our caboose ahead of her.

The high bridge seemed okay, so after about thirty minutes spent examining it, we moved cautiously ahead. The run was monotonous, moving backward at not more than six miles an hour, blinded by the caboose. By the time we reached the Madero water tank, dusk had fallen. While the tender was filled, Harvey rustled a bunch of red fusees and placed them on the rear platform. These would have to illuminate our passage through the crooked canyon.

This was a voyage to be long remembered. The fusee threw off little more than sulphurous fumes, which strangled and choked us as we tried to probe the pitch darkness with our smarting eyes. Yet its a red halo of light, penetrating only about twenty feet, was all we had to go by. The fusee would flare up into glittering brightness, then die down to a bare sputter.

Jap didn't go beyond three miles per hour. At any moment we expected to find a ten-ton boulder blocking the rails. On our left side, we could hear the smashing roar of the Lake Fork; on our right, the gloomy shadows of the stark cliffs and stripped trees. Every hour dragged. It was nearly ten p.m. when we slowly rounded a curve and caught sight of a bonfire a hundred yards away. Its flames leaped upward and outward, showering

sparks on either side of the right-of-way.

A red light detached itself from beside the bonfire and moved to the middle of the track, then it swung a wide washout. Jap saw it, answered, and big-holed her. We piled off the caboose and hurried toward the lantern.

As we came near, the lantern lighted the worried face of the Sapinero section foreman.

"Don't cross the bridge," he shouted. "It's washed out on the other end."

Wondering what would have happened had we blindly backed onto the structure, I felt cold chills run up my spine. Together we walked to the bridge, a steel and wood structure built in the form of a Howe truss. Our end was solid; but the river had cut under the sandstone pier on the opposite end. The whole bridge sagged almost twenty-four inches.

"Looks like we're stuck right here," Mahoney announced.

WE GAPED at each other. There was no grub on the caboose, and no bedding. All of us were starved.

"The dispatcher said to tell you to walk to Sapinero," the section foreman advised. "You can go over the hill on the old wagon road. He said to leave the fireman to watch the engine."

The fireman showed no enthusiasm till the foreman promised to send him a big lunch by one of his men. We took off, following what had originally been the old stage coach trail. It was steep, barely more than two-deep ruts carved by countless wagon wheels in the flinty earth. The journey was only about a mile, but it was the steepest up and down mile I've ever walked.

Maybe you think that Sapinero Hotel didn't look good when we finally stopped in front of it! In a short time we were seated in front of a big meal. After we'd eaten our fill, we hiked to the depot.

'They're running another work train early in the a.m.," the op told us. "Gonna try and pull your engine and caboose across the bridge. The big steel span over the North Fork went out today, and the branch down there is tied up tight."

But at that particular moment, just one thing impressed us. We had a good place to grab a night's sleep, and we were not so unappreciative as to let it go unused. Heading back to the hotel, we left the D&RG to the rail night owls.

The work train from Gunnison arrived at Sapinero about eight a.m. The crew had a gang of section men and a pile driver on board. Then they decided to couple their engine to the empty flats we'd set out the day before. Coupling these on ahead, they would cross the washed-out bridge and latch on to our engine and caboose. It was going to be risky, dragging our engine and crummy across that bridge; but the officials were willing to take the chance. If the bridge held up, they had saved a locomotive and a caboose.

The flatcars weighed only about eight tons, and the span didn't settle under their weight. We tied our caboose and connected the air hoses. Jap released the driver brakes on his engine and put her in back motion. Then everybody got in the clear.

"Take her away!" yelled Patton.

Jean gave a highball. Slack tightened on the flats. Our caboose and engine moved toward the bridge. The caboose went over easily. However, as soon as the thirty tons of engine came to the west end, the bridge sank down. It was as though everything had gone out from under it, and kept right on going. The hogger on the pulling engine yanked out his throttle to keep her moving. The sag in the bridge was so great the tender top began to bang against the cab.

As we watched, the bridge pier suddenly struck bedrock and held. Our engine rolled up the steep incline and halted on solid track. The bridge had sunk a good three feet under her weight.

When we got back to Sapinero there was a message waiting for us. The Lake Fork had cut away the fill on both sides of the two bridges, where we had left our own B&B gang the day before. In trying to save the equipment, the section men

were marooned on an island. The current was wearing away the fill on which they stood.

Yet until the flood waters subsided, there was nothing the company could do. However, a couple of cool nights in the timberline country could stop the fast melting of the snows. A break in the weather came; the streams began to fall. The bridge over which our engine had been dragged to safety was jacked up so that a work train could cross and the bridge gang brought back to civilization.

Four months passed before normal train service on the Lake City branch was restored, and it cost a pretty penny to repair the fills and bridges. But the company rebuilt those structures, even though less than ten carloads of freight moved over the thirty-six mile section in an entire month.

ABOUT the same time another stretch of track—undamaged by high water and as colorful a piece of alpine railroad as could be found anywhere—was abandoned. This was the nine-mile Floresta branch leading via Floresta Pass from Crested Buttes to one of the biggest anthracite veins west of Pennyslvania. At one point in the drop to the mining town of Floresta, the train crew could look due west for over a hundred miles into the State of Utah.

Along this roadway the snow was piled thirty-five to fifty feet high on the track, when and where slides ran. The company tried to keep the branch open a couple of winters, but the cost was too great. When the mine at Floresta was working the output was nine carloads per day, or two hundred twenty-five tons. The Crested Buttes switch engine did most of the work on the Floresta line, using a caboose tacked on the hind end of their empties.

The men who worked over that crooked nine miles of track had some thrilling experiences. I was fireman on a little wedge-plow engine one night when the flanger directly behind us jumped the track. One pair of trucks rolled two thousand feet down the mountain side, coming to rest in a thicket of big spruce and aspen trees.

Another time a car of coal behind the engine jumped the track on a high fill with a wooden bridge in the center. Before they could stop the engine, they'd torn down the bridge and left the crummy tottering on the edge of the chasm, just ready to topple over. Mainline crews were used on the rotary plow to open the Floresta branch, and it was usually a month to six-week job.

Woe to the member of the crew who shaved off his whiskers before the last foot of main line was bored out. The unfortunate rail showing up with smooth-shaven jowls was promptly oiled by the rest of the crew. Since a black variety of hot engine oil was used and the victim stripped before being oiled, it was anything but a pleasant sensation. That black oil burned and stung for hours, as I well know. I shaved once while we were opening the branch, because I'd made a date with a cute little hasher who worked in the dining room at the Elk Mountain House where all of us ate. I didn't enjoy that particular date, owing to the fact I couldn't sit down.

It was during that same opening that we high-jacked the keg of hard apple cider. Prohibition was still in order and that cider was as hard as the stuff can possibly get. One of our hoggers, a curious kind of a cuss anyhow, went staggering down the snow trench on Main Street about ten p.m. Suddenly he saw a four-legged tower with a nice big bell mounted on top. A rope hung down from it invitingly.

"Wonder what'd happen if I pulled the rope?" he asked me with drunken gravity.

"The bell would probably ring," I informed him with great perception.

The hogger grabbed the rope, and the bell did ring. The sound was delightful to our frosty ears. But I smelled a mouse when I saw men running from warm houses toward the little stall where the hose cart was sheltered. I beat it, fast.

The hogger was still ringing the bell merrily when the fire department panted up, pulling the two-wheeled hose cart.

WORKING a freight west of Gunnison we found the rail four feet out of line

"Where's the fire?" the chief demanded.

"Ain't no fire," the hogger informed him. "I'm just ringin' the bell."

So they threw the hogger in the can, where we found him next morning when he didn't show up for work. We all begged his release. Our rotary was late getting out of town, and the Traveling Grunt who was overseeing the job threatened to fire the next man who sampled any hard cider.

DURING the fall of 1922, the original 45-pound rails from Montrose to Gunnison were replaced with 60-pound steel. That lighter rail was tough, though. It had stood up under every kind of temperature, under the pounding of ten thousand trains and engines for almost forty years. On the sharper curves, the ball was worn off nearly to the web.

Picking late fall to relay the steel proved quite a mistake. The weather was cold and the steel shrunk. The rail slingers allowed for some expansion but not enough. We discovered that along in June, the following year.

Ever hear of a "sun kink?" On the narrow gage we called them "sun dogs." They occur when a hot summer sun begins expanding steel rails, which start creeping until they meet in pint-sized collision. Wherever they come together, they simply move the whole main line into a nice abrupt "S", or an abrupter "U". Locomotives smashing into a sun dog at speed have been known to turn over. More fortunate engines have navigated the kink at a cost of gray hairs for the engine crew.

My father, the late Lewis B. Lathrop, struck a sun kink while pulling a passenger train. Since he was doing about forty-five miles per hour, and the kink was just the other side of a curve, it was too late to stop when he and his fireman saw it. All Dad could do was wipe the clock, shut his eyes and hope. When his little kettle went onto the kink, she did everything but dance a Conga. The fireman was tossed across the cab into Dad's lap. Yet by the time they got untangled, the engine had gone over the kink with every wheel still on the rails.

I happened to be working a freight train west of Gunnison when the sun dogs first appeared. Running slowly, we saw them in time to get halted. The section men had to cut out four feet of rail to eliminate the first kink. We found two more that morning in the fifteen miles of Black Canyon, and both caused the removal of about the same amount of rail.

I've even seen sun kinks on the old Baldwin branch, on steel laid when the South Park built. Those rails had been punished for nearly thirty-five years without developing sun kinks. Then an unusually hot day caused them to crawl over the ties like snakes. On modern standard-

gage railroads, anti-creepers, heavy steel and tie plates overcome this trouble. But we didn't even have tie plates on that three-foot pike.

Traffic was heavy through the early 1920's on the narrow gage. It was nothing for the train crew to have to unload half or two-thirds of a carload of merchandise at a single station. Every little town had an agent-operator. Automobiles were beginning to come into the high country in greater numbers and new roads were being built. But the great majority of new cars were shipped in by freight.

During the early spring months, the railroad did a flourishing business hauling automobiles from Sapinero to Cedar Creek on flatcars, two autos loaded on each. The roads over the Blue Mesa and Cerro Summit were utterly impassable, and the company hauled the autos for fifteen dollars a piece. It was nothing to handle from three to ten flatcars west every day. These were unloaded at Cedar Creek, reloaded with eastbound autos and returned to Sapinero.

About the same time the road entered into an agreement with the sheepmen who wintered their woolies in Utah to cart their herds to summer pastures in Colorado. So in addition to our other freight, we railroaders enjoyed a spring sheep rush lasting two weeks to a month. It kept us going night and day, hauling loaded doubledeck cars from Montrose to Cimarron and Sapinero, then returning with the empties for reloading. Most of us were away from home all during the run, but we made good money out of it.

THE SHEEP rush reminds me of Harvey Gower again. Harvey loved to gamble. Dragging up the west side of Cerro Hill one morning early in our first sheep rush, I noticed Harvey on top of a double deck just ahead of the caboose, playing cards with some of the sheepherders.

When we finished unloading our cars and started back to Montrose, Harvey pulled out a sizable roll of bills and showed them to me.

"Where'd you get all that money?" I asked him.

"Made the sheepmen pay off twice: once to the railroad company, once to me," he smirked.

"I don't get you," I argued.

"They paid the company freight on their sheep. They paid me this when I got 'em into a poker game."

"Lucky dog," I congratulated him.

When we started up Cerro Hill, I dropped back to ride the caboose. I climbed into the cupola and Harvey joined me. He had a deck of greasy cards.

"Get out your money," he invited. "We'll play a little black jack. I'll deal."

"Hell," I told him, "I only got a dime to my name. You don't want to fool around for that little bit."

"A dime is ten cents," he grinned. "I'll add that to my capital."

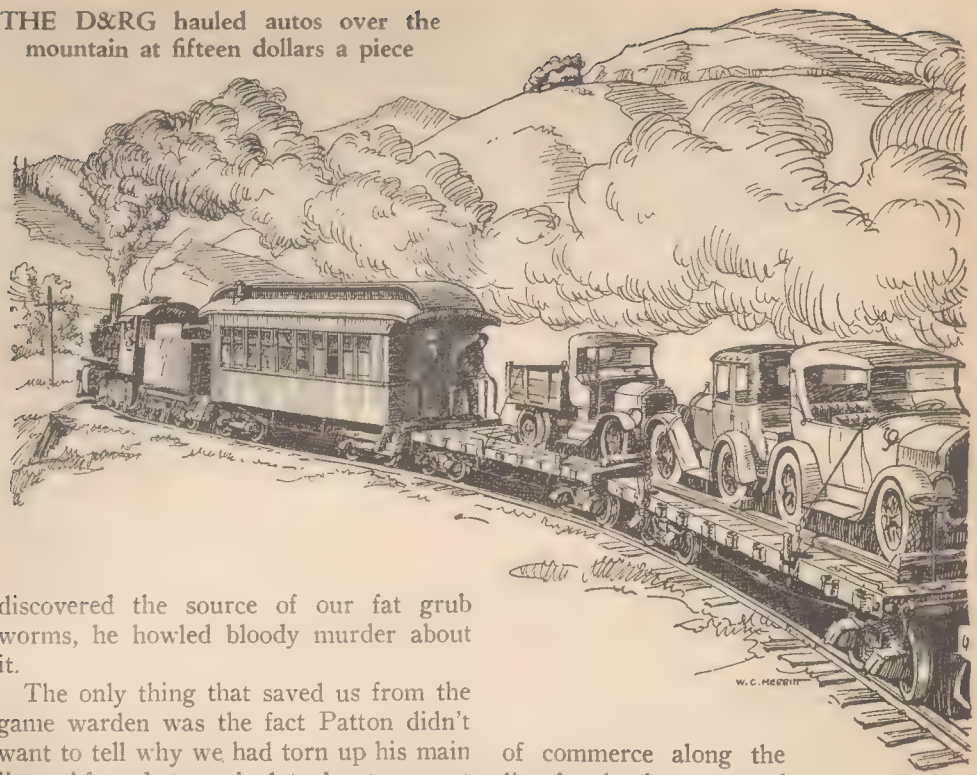
Harvey began dealing the cards. I threw down my dime and won. When we reached Cerro Summit, Harvey was broke and I had all the money. In Montrose I went on a spending spree and lived like a king.

Coming back to Montrose next trip Chet Trevarthen, our conductor, got into the game. When we hit Cerro Summit, Chet had cleaned out the pot and had a wild time in Montrose. Next trip, Harvey won what was left and got to spend some of it. So the original winnings passed 'round and 'round the crew, until nothing was left.

When the sheep rush was over that spring, we all got turned in again by our old friend, Roadmaster Patton. Although the season wasn't open for trout fishing as yet, the Lake Fork looked so inviting we decided to break a few game laws. We dug out a fish pole and some bait hooks. But we had no bait; that is, until I happened to stub my toe on a rotten tie in the main line. The tie fell apart and several fat, white grub worms rolled out.

During the next few days we kicked out about two thirds of the ties along a half-mile stretch in order to get bait. Then we began to enjoy trout a couple of times a day. But when Patton finally

THE D&RG hauled autos over the mountain at fifteen dollars a piece



discovered the source of our fat grub worms, he howled bloody murder about it.

The only thing that saved us from the game warden was the fact Patton didn't want to tell why we had torn up his main line. After that we had to locate a spot where angle worms could be dug.

THROUGH the 1920's new auto highways were building through the high country served by the narrow gage. By 1925 daily freight trains west of Gunnison were put on tri-weekly service. But the little five-car passenger train continued operating daily, boosted over Cerro by helper engines. As a result, three regular helper jobs were assigned out of Montrose.

The roundhouse in Cimarron had burned to the ground; and the Black Canyon Hotel, for years a landmark and an oasis for hungry rails, was closed and boarded up. The helper terminal of Cimarron moved to Montrose. What had for years been a thriving little railroad town was abandoned.

The narrow-gage glory days were swiftly approaching an end. In the late 1920's, the railroad began seeking the abandonment of passenger service between Salida and Ouray. But chambers of commerce along the line fought the move and little could be done. Trains still operated on time, but the varnish had been cut from the usual five, to four cars. This enabled the train to operate over Cerro Summit without a helper.

A brisk coal and livestock business came alive every fall. But the old 16-hour drags were gone. In 1926 ten brand new locomotives built by Baldwin were received by the narrow gage. This was the first new power purchased since 1908, when fifteen Vauclain compounds arrived to work on Marshall Pass. These engines had been quickly simplified, owing to the way they blew steam and obstructed the view ahead.

Promptly dubbed "Sport Models," the 1926 kettles were little powerful dreams. Superheated, with Walschaert valve motion, two double-cross compound air pumps and outside frames, those Consolidation jobs were fast and economical. Before they arrived a mudhen handled thirty-two empty coal cars from Gunnison to Crested Buttes. A Sport Model took

fifty, and made a whip-cracker out of them. Two of the Sports handled one hundred loads of coal from Gunnison to Sargents, foot of Marshall Pass.

Right on the heels of the Sport Models arrived ten larger, more powerful mills. These were 2-8-2s. The Sport Models had been numbered 470-79. The larger engines, dubbed "Mikes," were numbered 480-89. Then some months after their delivery, the company rebuilt some of its small, standard-gage 1100s into husky narrow-gage locomotives. A little house on top of the tender provided a place for the head brakeman to ride. These were numbered the 490s.

But this display of power was ill-timed. Remember the depression? That finished the spider web of narrow-gage railroads that for fifty years had served those timberline towns in the heart of the Colorado and New Mexico Rockies. The owners began offering various branches along the route to anyone who'd take them off their hands. The Lake City branch found no takers, and was abandoned and torn up. The Pitkin branch suffered the same fate. All the old railroad buildings in Cimarron were torn down so that the lumber might be salvaged. Nothing salable was left behind.

Daily service on the Crested Buttes branch was suspended, and a tri-weekly train operated instead. I saw a D&RGW timecard just the other day. It showed a daily train operating from Gunnison to Crested Buttes, leaving Gunnison at 9:15 a.m. and arriving back the same day shortly after 4 p.m.

The narrow-gage passenger from Gunnison to Montrose had to be abandoned finally and buses were put on. But the little string of varnish, modernized after all those years, still whistled into Gunnison from the east each morning. This little train was quite a swank outfit, boasting ornate vestibules, steam heat, electric lights and an elaborate parlor car. Jean Mahoney was conductor on this passenger train up to the day it was finally pulled off.

Yes, the company succeeded in finally abandoning all passenger service between Salida and Montrose in the late 1930's. The Crested Buttes switch engine was pulled off in the late 1920's; the one in Gunnison about the same time. It was put back on for short periods during the next decade, yet except for a short time in 1945—when a highway bridge over the Gunnison at Sapinero collapsed under a truckload of eggs—no passenger whistle has wakened the echoes in the Black Canyon since.

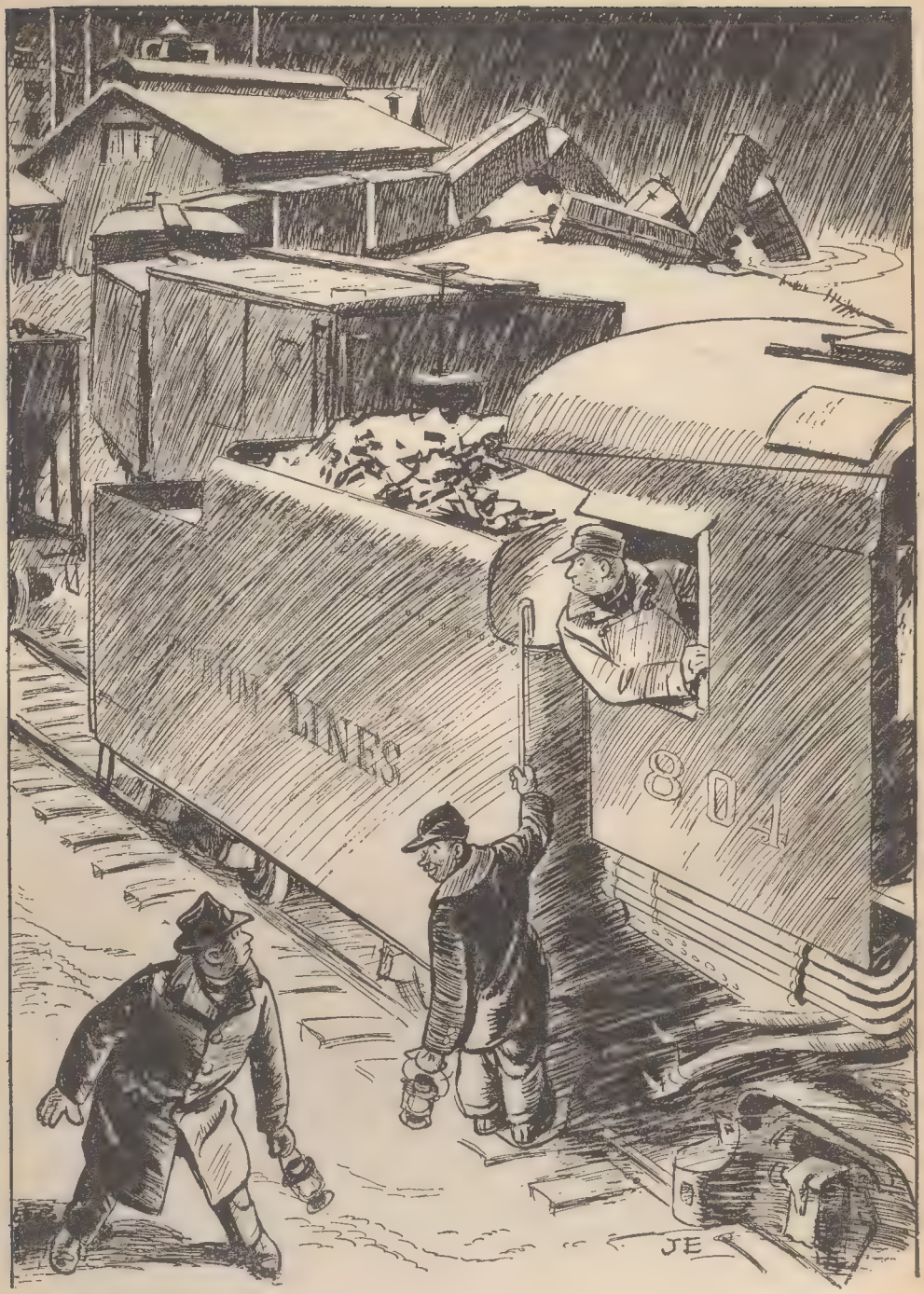
But pressure was brought to bear in the spring of '45 to reinstate the passenger train for a short time, until a new bridge could be built in the vital network of highways. However, we all knew it was only a temporary thing. The glory days were gone a long time.

The old grade to Pitkin can still be followed, as can the roadway up the Lake Fork. But the bridges are gone, and the rails and railroad buildings. Solitude has again taken over the three-foot trails laboriously followed by those pioneer chugging freight and passenger trains.

Nearly all of those narrow-gage railroaders mentioned in the foregoing story have signed the final "31" order, or have taken their pensions. After bucking the game on the narrow gage for fifteen years —from 1913 to 1928—this writer was forced to quit. Each succeeding year had found me a little younger on the seniority board, until by 1928 I was unable to hold a steady post even on the emergency board.

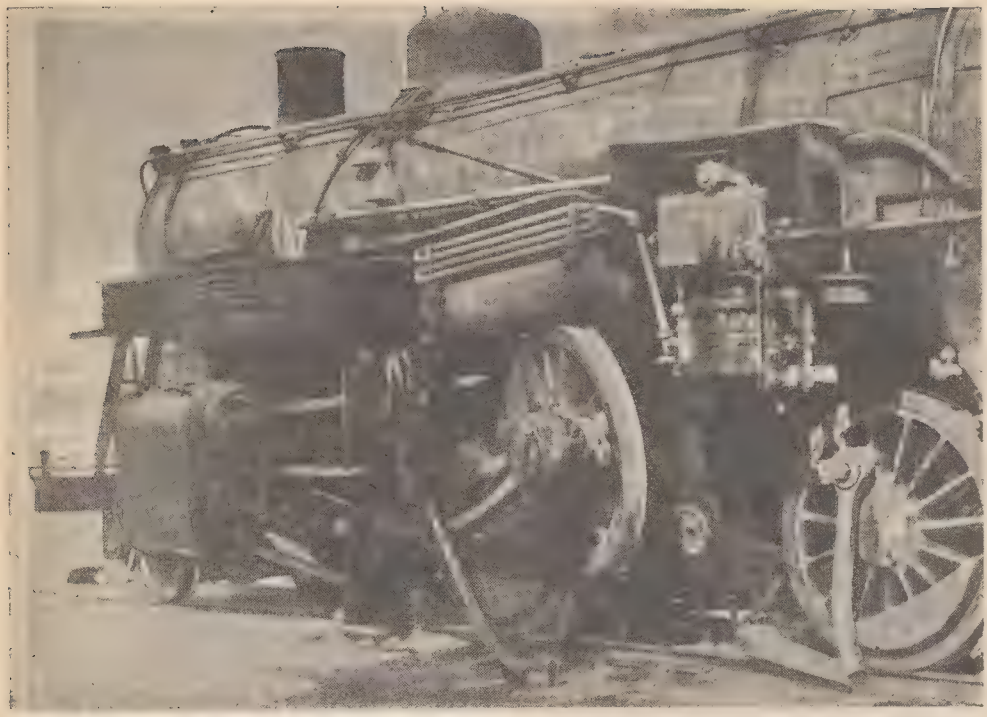
One of these days, I promise myself I'm going to take a trip back to the Colorado Rockies, and to the narrow gage. Maybe I can even promote a trip on the freight train to Crested Buttes, or down to Cimarron through the Black Canyon. It will be interesting to see what changes time has wrought on the "Hook and Eye" as I knew it. More than a few of those who work there now will be strangers. But there'll still be a kindred feeling between us, because once a narrow-gage rail, it's hard to get the affection for the stout little pike out of your blood.

(The End)



Not in the Wheel Report **By JOSEPH EASLEY**

"It was a little crowded but we shoved all them empties onto the Mill Spur."



Light of the Lantern

PINS AND AXLES

IF A SURVEY were to be made of power awaiting repairs outside any major railroad shop there would always be found an engine giving every appearance of having emerged from a wreck. Side rods broken and twisted into knotty masses; running boards cleared away; sometimes an air compressor missing and the brackets that hold it to the boiler freshly smashed. Further examination would reveal that a rod pin or a driving axle had failed—the reason for the damage. These accidents are the result of metal fatigue which cannot be avoided any more than a man can keep from growing old.

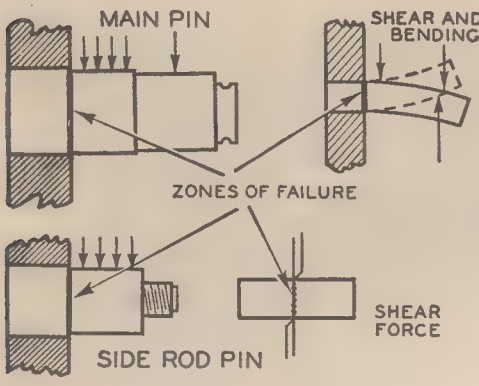
Enginemen who have seen such failures find the incident indelibly etched in their minds. They happen when the engine is subjected to heavy stresses, as at starting or while climbing a stiff grade. In passenger service they frequently occur when the train is running at high speed. Results are generally disastrous and not infrequently fatal to the men in the cab.

Railroad officials have not been asleep in their studies of the breakdown of the molecular structure of metals. Yet, with all their precautions, the danger is always imminent. Nor is it surprising that pins and axles give way when we understand the forces tending to destroy them. Water flowing lazily has cut deep canyons through solid rock. There should be no surprise then when a giant locomotive suddenly decides to shed herself of some of her parts.

Let's take an engine with a boiler pressure of 250 pounds, having twenty-four-inch diameter cylinders. When steam is admitted at the beginning of each stroke an initial pressure of fifty-seven tons is

Photo by Hugh Barth, Crisco, Ia.

Pins and Axles are Tough; They Have to Be to Withstand More than 500 Reversals of Piston Thrust Each Mile



exerted on the pistons and passed back to the main pin. If the drivers have an outside diameter of seventy-five inches there will be 268 revolutions for every mile traveled. Double that figure for the number of strokes and the wonder is that there is anything left of the pins and axles after a hundred thousand miles of fast running.

THERE ARE two principal types of stresses that must be calculated in the design of rod pins. Those which are short are subject to shearing stresses as shown in one of our diagrams. The longer, or main pins, in addition to receiving this cutting force, must resist a bending stress. The latter action is caused by the thrust of the main rods, together with the leverage afforded by extended shanks. It would not be too severe except for the rapid reversal of power application, which hastens metallic breakdown.

The same forces which play havoc with pins, together with several others of which the most severe is a twisting action, or torque, are imposed upon the driving axles. Made considerably heavier than the pins, since they must support much and in some cases all the engine weight, in addition to holding the wheels in alignment and absorbing main and side-rod thrusts, they demand the best of alloys in addition to bulk.

Unfortunately for the reciprocating locomotive, the strain on the axles and pins cannot be made constant as in the case of the steam turbine or electrically driven job. In changing horizontal forces to rotating motion we have seen that the direction of applied energy alternates. Also the thrust on the piston varies during each stroke from that of the boiler pressure to that of the exhaust, which latter is very low. Even so, things would not be so bad if the wheels were geared to the rails. For when frost or dew or other foreign matter is present on the rails, slipping results, and as the wheels grab again there is a violent wrenching action.

What is being done today to resist all of these forces? The first thought in the engineer's mind is to set the pins and axles so that they will be held securely in the wheel centers. Past practices have been many and varied, but the standard means

of application will be considered, here.

In the machining of wrist and-valve-gear pins, where nuts and keys are used, a tapered fit has been found to be the safest practice. With axle and rod pins, however, a straight press fit is employed and, strange as it may seem, such a union seldom works loose.

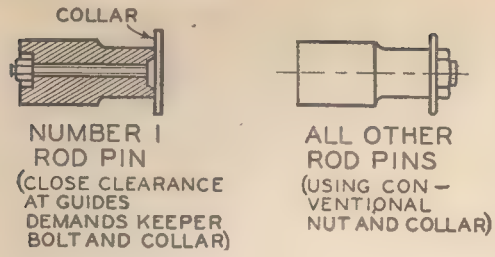
THE THEORY of the pressed fit might be likened to that obtained when a rubber band is snapped around a coil of paper to hold it in position. For as the pin is forced into its bore the surrounding metal is reluctant to give much ground. It's resisting pressure actually produces a gripping force around the entire circumferance of the pin.

Though there are slight variations in the relative sizes of borings and pins used in engine shops, the former are, of course, always slightly smaller in diameter. The difference amounts to around .0015 of an inch for every inch of pin diameter. In order to guide the metal spindle into place it is given a slight end taper. A pressure of ten tons for each inch of axle or pin diameter has been found best for the fitting process. When this figure is increased to any great degree small cracks are apt to appear in a wheel center and these lay the groundwork for future engine failures.

Standard practice is to force pins and axles into place by means of a hydraulic press. But recently another method—one first developed in the automotive field—has been used successfully. There the simple process of contracting metal by chilling it in dry ice is put to work to reduce the diameter of the oversize pin, while at the same time the wheel center is expanded under a steam jet. It is then possible to drop the former into position without the use of pressure and as the two masses return to normal temperature the result is a powerful union free from the disadvantages of the press fit; namely, fine particles of burred and broken metal which create

Photo from C. L. Collom, 491 Walnut St., Meadville, Pa.

SMALL cylinders and low boiler pressure put very little strain on old-time axles and pins. This handsome New Orleans & North Western (MoP) eight-wheeler was originally built for the Erie and remodelled in that road's Meadville (Pa.) shops


COLLAR
NUMBER 1 ROD PIN
(CLOSE CLEARANCE AT GUIDES DEMANDS KEEPER BOLT AND COLLAR)
ALL OTHER ROD PINS
(USING CONVENTIONAL NUT AND COLLAR)

a scraping action making the removal of a damaged pin very difficult and necessitating oversize boring before a second pin can be applied.

Not completely satisfied with either the press fit or the temperature-variance method of pin application, some roads have adopted the policy of countersinking the inside surface of the pin bore and heading the pin itself over so that it cannot fall out of place even if it should happen to loosen up. This type of failure, however, is a rarity for pins are most likely to give way in that zone which is flush with the edge of the wheel. The same is true of axles.

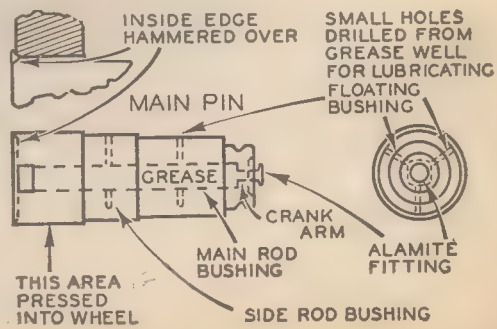
VARIOUS RAILROADS have different standards for pin and axle maintenance. Federal law insists upon the date of application and the kind of metal used being stenciled upon them. Abbreviations are allowed. "S", for example, stands for plain steel; "HTS" for heat-treated-steel; "CHR" for chrome steel; "VAN" for vanadium; "NK" for nickel; etc. Also a record is kept in the shop office which serves a valuable purpose. For when a new fleet of engines is put into service and a metal failure occurs with one of them it is almost certain that the others will develop the same type of fracture when the same mileage is accumulated. By removing the corresponding part or parts on all the Class at the proper time, accidents are greatly minimized.

Each road determines its limitation of pin wear. Some motive power departments press out and renew the main pin at every shopping, allowing the side rod pins to remain in service until Class-3 repairs call for a new set of flues (once every four years). It might be added that unless they run hot, due to improper lubrication, they give very little trouble.

As for axles, Federal law allows certain amounts of wear, after which renewal becomes mandatory. The greatest care is used both in mounting the wheels upon them and in subsequent inspection. When tires are turned, magniflux is used to detect possible flaws. And in as much as the fracture zone extends about one inch into the wheel fit the drivers are pressed off from two to three times that distance during inspections to detect any possible indication of cracking.

Most modern axles are hollow bored as it has been found that this not only makes for greater strength in proportion to weight, but allows for ready spotting of flaws. Experience has shown that when a failure occurs the old fracture has already extended over more than fifty percent of the cross-sectional area. Because such cracks always come where grease is present this lubricant inevitably works its way through the rupture and into the axle bore. Its presence there demands removal of the locomotive from service.

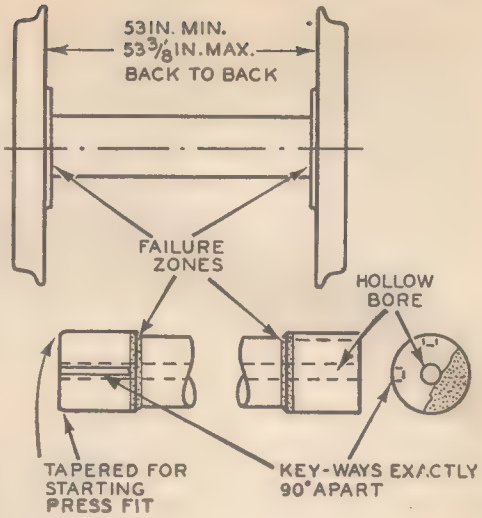
MOUNTING WHEELS on axles is a precision job. Every schoolboy knows that whether an engine is run forward or backward the crank pins on both sides cannot be mounted in corresponding or directly opposite positions or the machine will eventually stall on dead center. This is overcome by placing the pins exactly 90 degrees, or a quarter of a revolution, apart. With this arrangement, regardless of where the locomotive is stopped, the

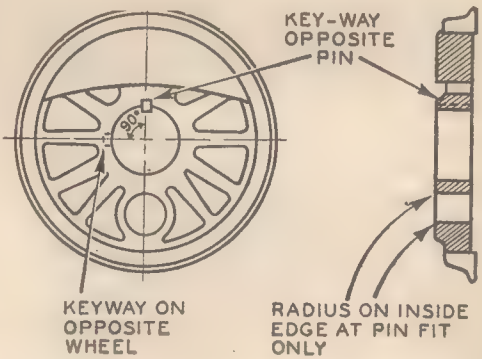


piston on one side or the other is able to exert high rotative force.

This, of course, produces an uneven torque action on wheels and axles and the two must be keyed together to prevent one from moving independently of the other. Furthermore, the keyways have to be milled very accurately for if one wheel in a set is out of "quarter" even the slightest amount, there is a binding action as the pin spacing varies. Rod bushings subjected to this punishment soon run hot.

Another precaution that must be taken is to press the wheels on to exact depth. The gage of the track is constant (except for a slight broadening on curves to relieve the binding action of a long wheelbase) so the drivers must conform without much variation. Federal law stipulates that the back-and-back dimensions must not be less than fifty-three inches or more than fifty-three and three-eighths. On roads where curves are numerous and sharp the wheels are kept as close together as the Law allows, while prairie roads avail themselves of maximum spacing. As all driving tires have a slight taper there is a tendency, if the lost motion between flanges and rails is great, to set up a swaying motion which at high speeds may be communicated to the cars, making for rough riding and severe lateral stress to the rail structure.





BEFORE the Diesels came. O & W's *Mountaineer*, rich in maroon and black, shown leaving Middletown, N. Y., in the middle '30s

Photo by Albert G. Hale, 82 Roberts Road, W. Medford, Mass.

RUTLAND'S Number 120 ***The Whippet***, double-headed by Consolidation 29 and Mikado 37, gets a clear board through East Wallingford, Vt. Signals are placed across the track from station for better visibility

The Information Booth

1

DID ALCO ever deliver a solid engine train to any railroad, similar to Baldwin's Prosperity Special, described in your January issue?

American Locomotive Works never made up such a train of locomotives for delivery, due to the fact that customers preferred prompt delivery of each locomotive as completed to receiving several units at one time. However, a mass shipment of locomotives did occur during the New York Port strike last summer, when nine engines built for the French National Railways were held in a Schenectady freight terminal because of the railway embargo on shipments to strike-bound ports. As soon as the embargo was lifted though, the French engines were coupled to a regular New York Central freight train and made the trip to New York in a normal manner.

2

EXPLAIN the meaning of an "NC" sign which I saw on a trolley span wire in Baltimore.

The "NC" sign is a warning, placed above a nonclear curve, meaning two cars won't clear there in passing. Many cities use this type of indication.

3

WHAT is the present status of train telephony installation on the Pennsy's Middle and Pittsburgh Divisions?

Installation of the first large scale, permanent system of train-to-train, locomotive-to-cabin car *(PRR for caboose)*, and train-to-tower continuous telephone communication is nearing completion on the four-track main line of the Pennsylvania between Harrisburg and Pittsburgh. Including an earlier installation on the Bel-

Photo by Frank Chalfeller, 9 Plymouth Circle, Asheville, N. C.

GREEN-BOILERED mountain power snakes Southern Railway's Washington-bound Number 16 around a sharp bend on to Mill Creek Trestle, east of Asheville, N. C.

Del branch in New Jersey, the Pennsy now has the train telephone in 150 passenger locomotives, 131 freight engines; 100 cabin cars, and 16 wayside control towers, making a total of 397 units. In all, 319 miles of line, including 1056 miles of main tracks, are covered.

All new locomotives on order for service on the main lines are to be equipped for train telephony. Although several wayside stations, and some engines and cabin cars remain to be equipped, the train telephone system is now in operation on a twenty-four-hour daily experimental basis, the entire distance between Harrisburg and Pittsburgh. Begun more than two years ago, the project has been delayed by material shortages. The total cost to the Pennsy will be more than a million dollars.

4

PLEASE furnish details on the new branch line which the Canadian National is planning to build in the Province of Quebec.

The CNR is authorized to construct a new fifty-five-mile branch line in Quebec, running from Barraute—on the Transcontinental line between Senneterre and Taschereau—in a generally northerly direction to Kiask Falls on the Bell River. This route is expected to open up new timber country and to encourage agricultural settlement in the region. The CNR has two other relatively new branch lines in this area: the Noranda-Senneterre line built in 1937-38; and the Taschereau-Rouyn line, operated about 1931.

5

SUPPLY information on the tests which the Santa Fe has been making with its new electronic devices for measuring strains and stresses on its structures and equipment.

Two successful tests, employing the AT&SF's new electronic instruments, have been made: one at bridge 51-A near Topeka, Kansas; the other at bridge 186-C, near Galesburg, Illinois. More will be made on various parts of the system.

Santa Fe's electronic equipment consists of sets of magnetic and resistance-type strain gages, together with associated devices which include oscillographs for converting the impulse of the strain gages into graphic records, and instruments necessary for checking the accuracy of the equipment in use. Other registers show the magnitude and frequency of vibrations set up in separate parts of equipment, and the pressures in cylinders of steam or Diesel engines.

The resistance type of gage mentioned above works on the principle that change in length of a resistance wire or carbon strip, cemented to the surface of the part being tested, changes the electrical resistance of the gage. This variation is much less than in the magnetic gage and requires amplification electronically through radio tubes, to permit recording by means of the same equipment used with the magnetic gage. The advantage of the resistance-type gage is that in addition to the measurement of stresses in rails and bridge members, it may be adapted to obtain stress measurements in structural parts of moving vehicles, such as cars and locomotives.

The resistance gages are particularly effective, since they require very little room and are cemented directly to the part under investigation. No other fastening is required; whereas magnetic gages have to be fastened down with screws in accurately drilled and tapped holes. These resistance models can be reduced in size and several placed side by side in a given space to record variations in stress over the area.

The Santa Fe equipment is capable of recording forty-eight stress measurements in different locations in bridge members, rail or other parts, which are to be subjected to analysis. By using the magnetic type gage connected to a cantilever beam with a carefully measured weight at one end, vibrations may be measured up to frequencies of seven hundred cycles per second.

6

LIST new Central of Georgia Diesel and streamlined equipment.

The C of G received eight 2000 horsepower Diesel passenger road engines in the latter part of 1946, and have on order four 1500 horsepower Diesel freight road locomotives and 2000 horsepower switch engines, which should be delivered early this year. Fourteen lightweight, deluxe streamlined coaches are also on order.

All through Florida passenger trains are now being operated with Diesel power, enabling the road to make a reduction in schedule on the *Flamingo* and *Dixie Limited* between Atlanta and Albany, Ga., and to provide an earlier arrival of the *Seminole* at Birmingham, Ala. Central of Georgia has just completed a $200,000 Diesel repair shop at Macon, together with Diesel fuel station, wheel-changing and air-brake repair facilities at Macon Yards.

7

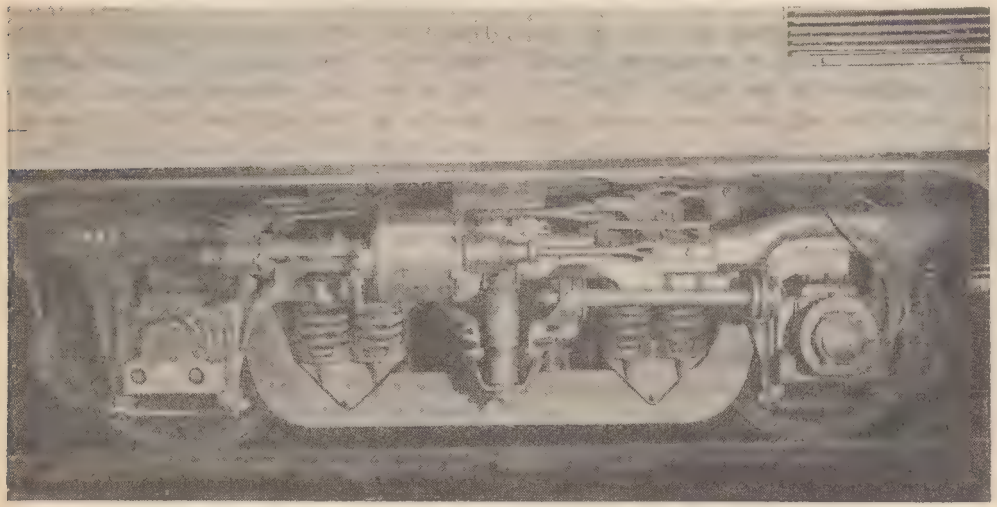
NAME the first passenger railroad wreck in the United States.

So far as we can determine, the first passenger train wreck in American history occurred on the Camden & Amboy main line between Spotswood and Hightstown, New Jersey, on November 9, 1833, just two years after the *John Bull* went into service. One carriage was turned over and twelve of its twenty-four occupants were seriously injured. One of the victims was "Captain Vanderbilt, formerly of the New Brunswick Steamboat."

8

GIVE the history of the original "Wabash Cannon Ball" and tell about Frisco Engine Number Nine.

In a Wabash folder dated April, 1884, we find a train operating between Chicago and Kansas City via Forrest, Peoria, Jacksonville, Ill., Hannibal and Moberly, Mo., designated Number 1 Westbound and Number 6 Eastbound; leaving Chicago 12:30 p.m., arriving Kansas City 9:00 a.m., and leaving Kansas City 6:30 p.m., arriving Chicago 2:50 p.m. Consist of the train shows "Smoking car, elegant coaches, reclining chair car (seats free), and Pullman Palace Sleeping Car (or new Mann-Boudoir car attached through without change. Meals in Wabash dining cars except supper at Peoria on train



DIRECT ACTION hydraulic shock absorbers, built by the Monroe Auto Equipment Co., make for a smooth ride on Chicago & North Western's "*400s*"

HEAVY ARTICULATED POWER on the Rio Grande. As we go to press the road is preparing to turn back the 3800 class Challengers allocated to it during the war

Number 1, breakfast at Peoria on train Number 6." In July, 1885, the same schedules are given, with the expression *Cannon Ball Train* used for the first time.

This schedule is given in subsequent timetables, modified slightly. In the folder dated July 15, 1887, Number 1 left Chicago 12:30 p.m. instead of 1:00 p.m., and Number 6 arrived Chicago 2:20 p.m. instead of 2.50 p.m. To the best of our knowledge this was the only train officially known as *Cannon Ball Train,* though C. J. Sayles, Wabash general freight traffic manager, who sold tickets in Council Bluffs years ago, and Conductor J. W. Jones, who was a boy living around Foristell and St. Charles County, Mo., both state that a passenger train known as the *Cannon Ball* operated between Omaha and St. Louis.

According to "Haywire Mac," author of *The Big Rock Candy Mountain* and an authority on American folk music, the poem about Frisco Engine Number Nine is "kid stuff" and, so far as he has been able to find, not part of a song. He has heard:

Engine, engine, number Nine, running on the Frisco Line
Running east, running west, running over the cuckoo's nest.

This couplet was used as one of those "out goes he" incantations used by children to determine who has to be "it." In San Francisco, "Haywire Mac" heard little girls chanting this couplet, and several others, for jumping rope. Two turned for one or two to jump. Number Nine sometimes ran on "the Chicago Line" or "the Mountain Line." Added stanzas were:

If you are the engineer you must see the track is clear.
If you do not see a switch you might land right in the ditch.

If you stop in Illinois you will see a lot of boys.
If you stop in Omaha I will run and tell your ma.

If you stop in Arkansas you will have a
Moth-in-law.
If you do not stop at all you can jump
until you fall.

The first two stanzas are at ordinary tempo, but going into the final four lines the rope is turned faster and faster, in the "salt, mustard, vinegar, pepper" progression, until the jumper misses.

9

WHAT is the cost of a modern harbor tug, of the type used in car ferry service in the New York and Philadelphia harbor areas?

The Erie's Diesel tug *Rochester,* a good example of such a craft, cost a little over $200,000, though it would take more than double that to replace her. With a 1000-horsepower Diesel engine, she can operate for ten days or two weeks without refueling. There are six men aboard the *Rochester*—the captain in her wheelhouse, two men (engineer and oiler) in her engine room, and the mate and two deckhands. The crew doesn't live aboard the tug, but she has every facility there for the preparation of meals.

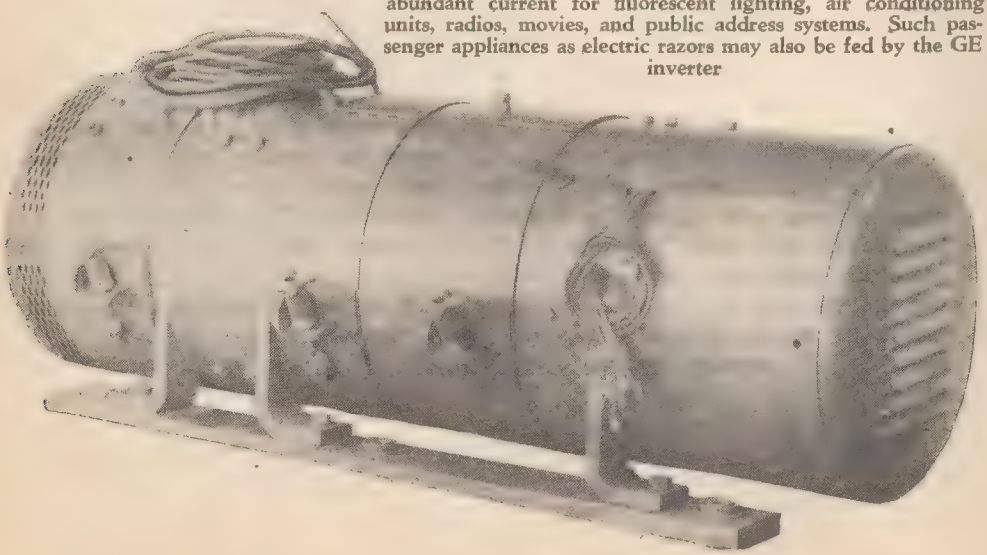
10

HOW does the extra board operate?

No set rule or procedure can be given, since methods of operation vary widely with different roads, and, in some cases, even on the same division of a railroad. We can merely state an example here. In Coatesville Yard, the Reading Company uses the following system: For the brakeman and firemen, all extra work for the first five days belongs to the extra man. The oldest applicant applying for the vacancy will be awarded it on the sixth day. Regarding engineers, the work belongs to the extra man for the first ten days. The senior applicant applying for the position will be awarded it on the eleventh day.

When a man is awarded a position on the sixth or eleventh day, that is considered a "hold down." The man is temporarily taking the position of a regular assigned man, who is off duty for any number of reasons; the job is not an open permanent vacancy. As soon as the regular man returns to his position, the "hold down" candidate must return to the extra board or his regular assigned position, as seniority governs in all cases.

AMPLE SUPPLY of 110 volt, 60 cycle A.C. current is provided in new luxury coaches by this amplidyme booster inverter recently developed by General Electric. More efficient than previous inverters or alternators it supplies abundant current for fluorescent lighting, air conditioning units, radios, movies, and public address systems. Such passenger appliances as electric razors may also be fed by the GE inverter



DRAMATIC STREAMLINING features new six high-wheeled Atlantics which recently went into service between Brussels and Liege and Brussels and Ostende. They are designed to attain speeds of 96 miles an hour with trains of medium weight

The usual procedure of "first in, first out" is followed. That is, the first extra-board man or crew in from a run is the first called out again, after the eight-hour minimum rest period required. This works in regular rotation. However, if a man or crew misses a call, he is dropped to the bottom of the list as a penalty. The procedure followed is very complicated, and varies widely. There is generally an agreement between the local or general chairman of the union and the management of the railroad as to how they want it handled.

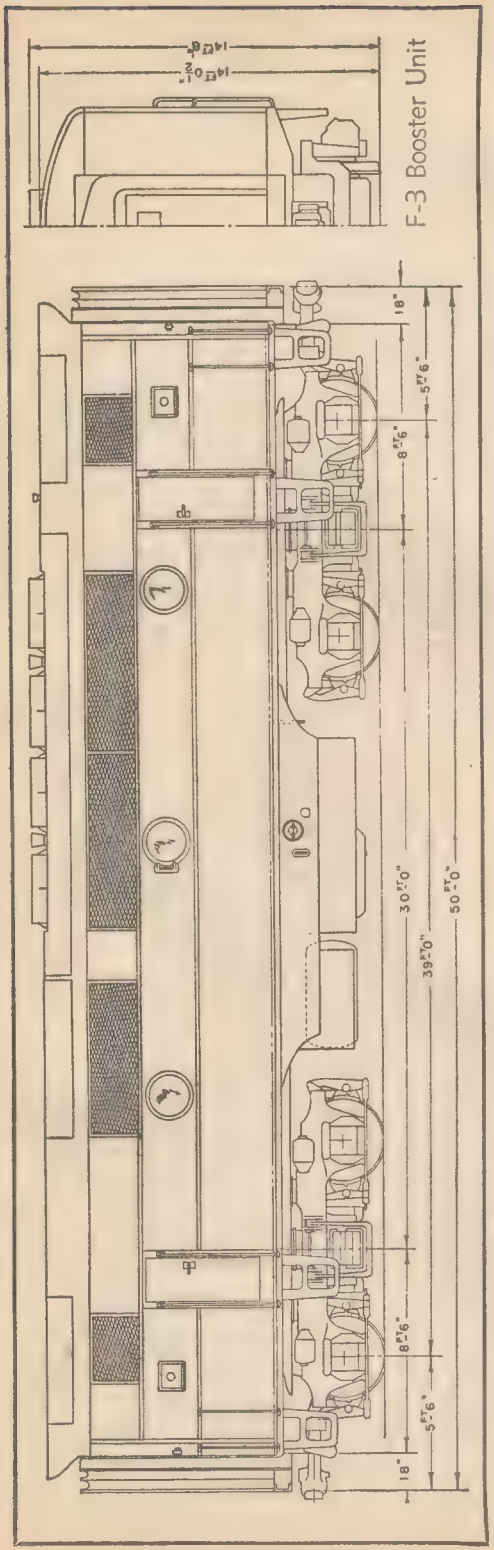
In Coatesville Yard, where there has never been a call boy employed, if an extra man has been given an hour and a half or longer notice of when to report—for a job, for which he has been marked up on the board—and they are unable to contact him at the yard, the railroader is automatically dropped to the bottom of the list, no matter where he lives. If the call is less than the above time, however, there is no penalty given.

11

CAN *you furnish any data on rocket brakes?*

Rockets, fired in reverse from the side of a speeding train, may soon help to avert railroad accidents. Scientific study of their use as brakes, undertaken by Dr. Theodore von Karman, California Institute of Technology aerodynamics authority, has proved the plan possible, according to William O'Neill, President of General Tire & Rubber Company, whose firm is now working on rockets for actual tests. Using normal braking equipment, a streamlined train traveling at one hundred miles an hour took thirty-seven seconds to stop in a recent test. It traveled 3060 feet after the brakes were applied.

Dr. von Karman thinks this stopping distance can be cut down to 2060 feet by a 500,000-pound thrust from rockets fired for four seconds. Traveling at seventy miles an hour, the same rocket equipment —which would add only one or two percent to the train's present weight—would cut stopping distance to 850 feet. By doubling the thrust for the four-second period the hundred-mile-an-hour train could be stopped in 1280 feet.



Locomotive of the Month:

General Motors F-3

PUBLICITY accorded the 1500 horsepower Diesel-electric locomotive unit now being offered by General Motors for freight and passenger service indicates the ever-quickening tempo of competition in this field. With six manufacturers vieing for a lush market, mechanical improvements are now being introduced at a pace comparable with steam locomotive developments a century ago. Basically, the trends are in two directions—reduction of bulk in relation to power output, and dual-service design.

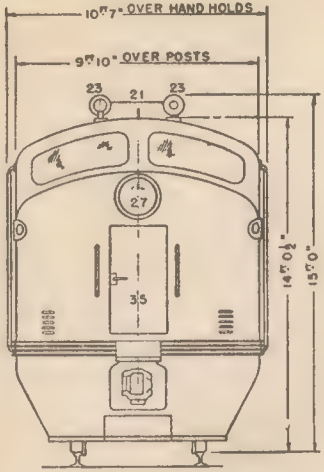
In the first field one of the Diesel-electrics' inherent virtues has, until recently, actually retarded progress. This is the multiple-unit control feature which permits any number of engine units to be coupled together and operated as a single locomotive. The result is impressive performance, but it spells a costly engine, both to buy and to maintain. Hence a simultaneous move on the part of all Diesel manufacturers, now that the race for orders is on, to crowd more horsepower into a single cab.

Baldwin's latest bid is a 3000 horsepower unit housing two Diesel engines, while Alco and Fairbanks Morse both offer 2000 horsepower jobs, each with a single Diesel. General motors' new F-3 is a stepped-up version of the tried and proven 1350 horsepower, one engine unit, first Diesel road freight engine to take to American rails.

In the dual-service field it can be safely assumed that the days of the specialized freight or passenger Diesel locomotive are numbered. As in the case of the electric jack, all that is needed to adapt such a "motor" to either service is a change in gearing. GM now offers seven standard ratios, giving the F-3 a wide variety of

Continued on page 70

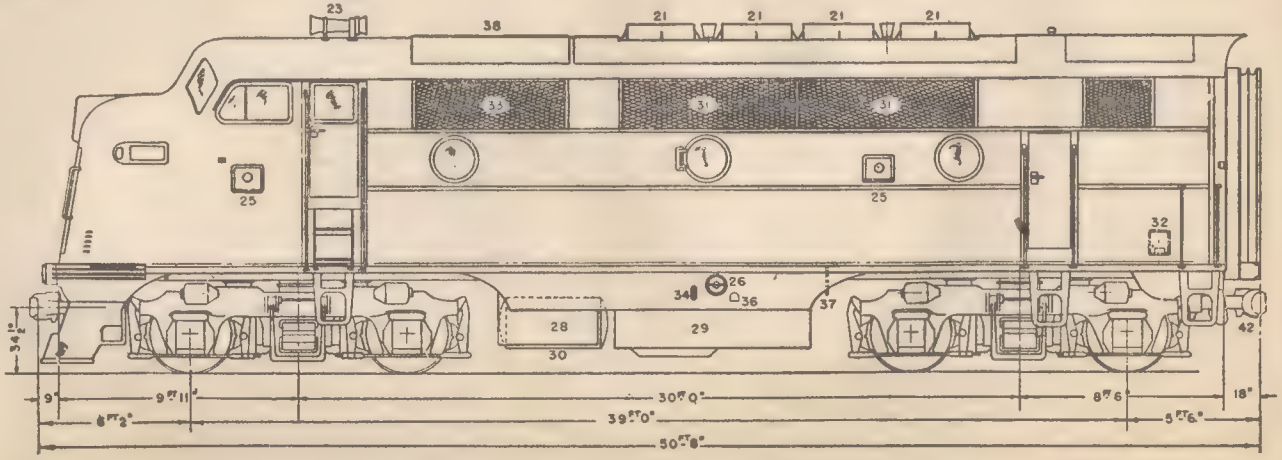
PREDECESSORS of the F-3 are 5400 horsepower four-unit GM freight haulers of the type pictured here, hauling war supplies on the Rio Grande. With the falling off of freight traffic a number of these engines were geared for passenger work



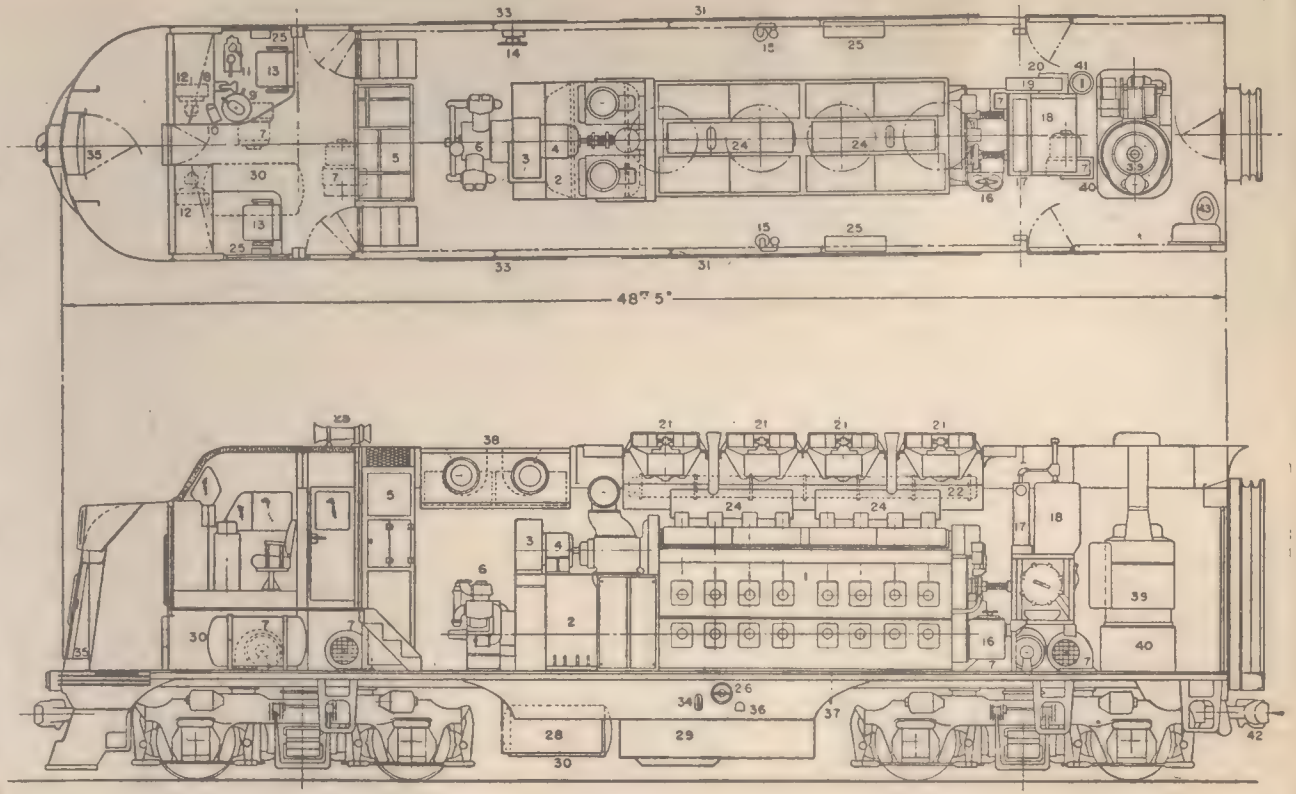
speed and power characteristics.

Four unit engines equipped with sixty mile an hour top gearing, for example, can haul heavy freight trains on all but the stiffest grades without the aid of helpers, while one hundred mile an hour installations make the same engine practicable for such assignments as the Santa Fe's *Super Chief* and *Chief*, and PRR's *Detroit Arrow*. Other innovations of the F-3 are a generator that produces both alternating and direct current—the former to power accessories and auxiliaries heretofor connected directly to the main engine by "V" belts and shafting, which in many cases made for inconvenient placement of such elements; re-spacing of bolster centers to reduce cab overhang on curves and an improved system of regenerative braking for use on mountain divisions.

1. Engine E.M.D Model 16-567 B
2. Main Generator and Alternator
3. Generator Blower
4. Aux. Generator
5. Control Cabinet
6. Air Compressor
7. Traction Motor Blower
8. Instrument Board
9. Control Stand
10. Speedometer Recorder



11. Air Brake Valve
12. Cab heater
13. Seat
14. Hand Brake
15. Fuel Tank Vent With Flame Arrestor
16. Lub. Oil Filler
17. Lub. Oil Cooler
18. Engine Water Tank
19. Engine Control and Instrument Panel
20. Load Regulator
21. 34" Fan and Motor
22. Radiator
23. Horn
24. Exhaust Manifold
25. Sand Box
26. Fuel Filler
27. Head Light, (Fixed Beam)
28. Batteries
29. Fuel Tank, 1200 gal.
30. Main Air Reservoir
31. Air Intake and Shutters
*32. Boiler Water Filler
33. Air Iutake for Grids and Engine Room
34. Fuel Tank Gauge
35. Door, (Plain)
36. Emergency Fuel Cut-off



37. Engine Water Filler
*38. Dynamic Brake Grids and Blowers
*39. Boiler
*40. Boiler Water Tank, 200 gal.
*41. Boiler Water Softener
‡42. Coupler Between Units
43. Toilet

‡Modifications
*Options

Rolling Wheels

By RAYMOND HULL

The Newspaper Girl Had Auburn Hair But That Wasn't What Made Bert Lardner See Red

BERT LARDNER had been waiting scarcely five minutes in the Pullman Company's district office at Terminal City, when he began to wonder what had come over the place during his two month's absence. He'd never seen everybody so keyed up and edgy. There was "Slow John" Simmons, for instance. Instead of moseying along in his usual unhurried but efficient manner, the lost-property clerk was jackknifing in and out of his big wardrobe closet as though possessed, rummaging for some woman's umbrella. In another corner, the plump and cheerful Miss Wright hammered away at her typewriter, chewing her gum as though trying frantically to hold her temper. A flustered and perspiring brunette with hair veiling her eyes slammed filing cabinet drawers open

THE conductor worked fast to bring order out of chaos

and shut, thumbing the folders. And to add to this commotion, the new assistant superintendent at the desk by the corner window was bawling out a young conductor.

Tubby Lardner shrugged. None of his business. He'd be out of here as soon as he'd seen his friend Jerry Shehan, the chief clerk, who was dictating to a toothy blonde. Or could it be his business, at that? The conductor shifted his two hundred pounds uneasily on the hard wooden bench. Perhaps all this upset was behind Jerry's mysterious note suggesting that he find some excuse for making this overnight trip from Cape Haddock, where he acted as summer agent. Glancing at the portly chief clerk, Bert noticed that even this generally imperturbable individual appeared harrassed and tired. Some-

thing was certainly stewing here, and it didn't smell so good.

The quarrelsome tone of the new assistant super focused Tubby's attention on him. James Harrison was a well-built six foot, but he had grown slightly flabby. Thirtyish, with tawny hair slickly plastered down and a smooth, round face, he appeared more like an overgrown kid than a typical brass hat. His eyes bulged as he spoke with too much emphasis, his attitude daring anyone to disagree.

Nevertheless, at that precise moment Pullman Conductor Bucky Shaw was apparently refusing to be steam-rollered. Everyone jumped as Harrison barked:

"Are you telling me that *I'm* wrong?"

"I didn't say that, sir," replied the skipper hastily.

Bucky, recently discharged from the infantry, held his lean but well-muscled body stiffly erect. Except for a nervous twitching of the cheek muscles, his darkly-tanned face betrayed no expression.

"What I meant," he continued, "was that it took you ten minutes to figure out where I could have seated two more passengers, while I had only five minutes at that stop to seat thirty, and no time for fancy juggling. I did the best I could. You'd have to be there to appreciate the problem, sir."

"What do you mean I'd have to be there?" shouted Harrison. "I have all the facts I need right here—this complaint and your diagrams. These people say you turned their friends away, and your chart shows that you had two seats open. That's all there is to it. The fact that you sold them to somebody else after you left the station has no bearing." Harrison leaned back in his chair. "However," he drawled, eyeing Bucky patronizingly, "I'm going to overlook this, since we're being patient with you until you get your nerves back in shape. But you might show your appreciation by not being so argumentative. That's all."

Tubby stared incredulously at the assistant while Bucky reddened, clenched his teeth and strode from the room. Where had that big clown learned to handle men? Tubby wondered. It hadn't been Sergeant Shaw's fault that the Germans had practically blasted him out of Aachen, that he'd been hospitalized for months because of battle fatigue. After his reinstatement as a conductor, the gang had overlooked Bucky's nervousness and had nursed him along, until now he was nearly his old cocky self. Tubby had helped a little, too, whenever Shaw relieved on the chair-car run to the cape. Not that he'd minded; Shaw was regular and conscientious.

The brunette at the filing cabinet slammed a drawer shut and grabbed at a stocking on the way down. "I can't find that statement, Mr. Harrison," she squealed, "and I never filed it. You did it yourself—I saw you!"

"All right, all right!" said the brass hat peevishly. "Put the rest of the papers on Shehan's desk; I'll have him handle it."

"That's right! Give it to Shehan!" muttered the chief clerk, as he hustled up to the railing. "Better meet me for lunch, Tubby, across the street. We can't talk here."

AT twelve-thirty Tubby squeezed himself into a booth in Hennessy's bar.

"What's up, Jerry?"

"Harrison," said Shehan wearily.

"We've had the twirp just one week, and the way he's loused things up is nobody's business. He's nagged the help until I can't handle them; he's got me nuts and the Old Man's mumbling to himself. Another week and there won't be any office. We'll all be wearing straight-jackets.."

"Good grief!" Tubby spluttered. "And Trumbull's standing for it! Can't he fire the guy, or transfer him? He's the boss, ain't he?"

"Not in this case. James Harrison, Junior, happens to be the nephew of Triggs of the Chicago general office, and Junior's being pulled up the ladder by the scruff of his neck. The very day old Clark retired, they jammed the guy in here to give him administrative experience. Naturally the boss squawked his head off, wanting to pick his own man. But when he saw the pressure behind this move, he agreed to take Harrison for three months, figuring that we could stand anybody that long. That's where Trumbull made his mistake."

Jerry sawed at his tough lamb chop. "If the twirp would only listen, it would help. But since he's worked in some yard office, he thinks he's the last word on railroading. The truth is, he's not ready for this job, and even if he were, I doubt that he could ever handle men."

"I noticed that," said Tubby. "I also noticed he was piling a lot of papers on your desk."

Jerry grimaced. "He keeps starting things he can't finish and then dumping the mess onto me. I'll be a month straightening out the office, after he's gone." The chief clerk gulped his beer. "But, hell . . . you get the idea."

"I can't miss it," grunted Tubby. "But cheer up, Jerry. Trumbull's smart. He'll figure out something."

"He has," Jerry grinned maliciously. "He's sending Junior to the cape. As your boss!"

"Good grief no!" Tubby slammed down his beer glass so hard it slopped over. "He can't do that! Does he think I'm going to stand for that Grade A political louser-up running me ragged like he has you? I'll go back to conductoring first."

Tubby slumped back and glowered. He liked that job on the cape; he'd been more on his own there than ever before during his railroad experience, and he'd worked hard. It did something to a man, a job like that . . . it sort of built him up, inside. Not to mention the widow Sophronia Clover, who lived there. Then suddenly Tubby chuckled. Shehan was having his little joke.

"You had me going for a minute," he said, "until I realized there's not enough work for two men."

"I wish I was joking," Jerry returned, "but there'll be plenty of work, because there's a couple of conventions on the way. You're stuck, Tubby, and I don't envy you."

"Not me," declared Tubby outraged. "I'll go back on the road. Will you ask the Old Man to see me this afternoon?"

"Okay," Jerry nodded, "I was half expecting that, but I hoped you'd stick. Try looking at it from Trumbull's angle. He's got to get the twirp out of here, yet he can't fire him, and he can't break his promise and send him back without making a powerful enemy at headquarters. Sure, I know it's dirty politics, but that doesn't help. So the only solution is to ship Harrison to the cape since theoretically, he's had enough yard experience to handle that. Then if he did start lousing things up, you'd be there. You see?"

"I see what a sucker I'd be, staying on a job just to keep an incompetent boss from floundering around like a bull in a china shop, and swallowing his insults into the bargain."

The chief clerk sighed. "I know how you feel, but I thought this job was right up your alley. You've done more wriggling out of jams than anybody I've ever known, and I was hoping to hear that Junior had gotten himself in some very hot water without hurting the service or boomeranging on Trumbull for sending him there. We'd all like to see that. I think we'd even take up a collection for you."

"Framing people ain't my style." Bert ate his apple pie in silence. "About Shaw—Harrison seems to be riding him. What's he got against Bucky?"

"Medals near as I can figure it. Shaw would never mention it, but the paper made quite a hero of him, and the office girls won't forget it. Junior, though, has flat feet and stayed home, so he's pretty jealous of Shaw. A damn shame!"

The pair meditated glumly on the current state of chaos. Suddenly, Shehan looked at his watch.

"Time to get back to the mad house, Tubby," he mumbled. "I'll arrange for your appointment first thing."

WHEN Tubby entered Trumbull's office at two thirty, the stocky grey-haired superintendent motioned him to a chair. "What's the trouble, Lardner?" he queried.

For the first time, Bert realized this was not going to be so easy. "I'd like to go back to conductoring," he said. "I figure that a man can either run a job or he can't. If I can't I'd rather pull out altogether."

"Am I to assume that you prefer not to work under Mr. Harrison?" Trumbull saw Tubby nod, and then looked out the window. "This move," he said tiredly, "is no reflection on your work. You've done rather well, on the whole."

For a moment there was silence. The super appeared unsure of himself, which was not at all like him. Then he focused on Tubby.

"A railroad man, Lardner, is sometimes subject to more grueling demands than men in other lines. And officials, including summer agents, are usually men who have more or less dedicated themselves to keeping the wheels rolling. Keeping the wheels rolling," repeated Trumbull, as though he wanted to emphasize the phrase. "Occasionally, Lardner, they are expected to do that under difficult circumstances. It is my wish that you remain on the cape. If you insist, however, you may go back on the road and I'll not hold it against you."

From under shaggy brows, the super's eyes questioned Bert. There was only a short pause before he got his answer.

"I'll stick, sir," said Tubby.

The Old Man stood up and walked over to the window. Only then did Tubby realize he had come as near as he ever would to asking for help. It was clear why Shehan had been so persistent. Unwilling to demean himself by explaining, Trumbull had maneuvered the chief clerk into putting the screws on the Cape Haddock agent. He knew he was asking a difficult thing.

"I'll keep 'em rolling somehow," Tubby assured him.

The super turned. It was obvious that once relieved of his worry, his mind had moved on to other troubles,

while anxious to show his appreciation.

"Thank you, Lardner," said Trumbull, and Tubby saw he meant it.

On returning to the conductor's room for his grip, Bert found Bucky Shaw changing out of uniform.

"It might interest you to know," he said, "that Harrison's going to be our boss on Cape Haddock."

"Isn't that just dandy!" Bucky's foot tangled in his pants leg and he kicked savagely. "One more crack about my nerves, and I'll bust him wide open."

Bert knew this was no empty threat. Shaw had been runner up in some amateur middleweight matches. No wonder Molly Clark admired him: slim hipped, muscles taut and firm, straightforward eyes, a good jaw, curly black hair. And it was no use suggesting that Bucky stay away from the cape, because Molly lived there. Tubby said the only thing he could.

"If you can manage to keep your mouth shut . . . the summer won't last forever."

"I know, and I'd hate to make trouble for you, Tubby." Bucky slammed his locker door shut. "Just as long as that big ape stays away from Molly. . . ."

NEXT morning Tubby Lardner was glad to step off the sleeper into the biting air of Cape Haddock. Beyond the end of the storage tracks, the ocean lay serenely calm. Tubby stood for a moment, absorbing some of its placidity. Then he entered the depot restaurant, and was lugubriously eyeing coffee which looked like mud tainted with flour paste, when a bright young voice said, "Good morning, my handsome rail!" and the red-headed daughter of Hogger Pete Clark swung aboard the adjacent stool.

"Calling me handsome won't get you any gossip for your paper," Bert grunted good-naturedly.

He liked this pert representative of the *Cape Haddock Chronical,* whose duties brought her to the depot so frequently that they had become friends. According to Molly's father, she was a neatly constructed piece of high-pressure machinery, medium-sized and with smooth action, but a mite difficult to brake sometimes. Tubby agreed to that, but he considered her no great shakes as a reporter; she was too apt to stretch the truth. Not that he held it against her. She only did it to help some underdog.

"What I'd really like," said Molly, "is a statement about this old depot, how it won't handle the crowds or something."

"Not me!" Tubby announced firmly. "You want to run me off the cape quick?"

"Not really, Tub!"

"Sure. The railroad employs the Pullman Company to give passengers hotel service, not to have its employes making public statements about the road's private business, such as squabbles with communities. Suppose you hired a dressmaker and she went around telling everybody that your house was a mess? That's not exactly it, but it gives the general idea."

Tubby sniffed his boiled eggs suspiciously. "Incidentally, I saw your boy friend yesterday. It's a wonder you two don't get married. I think it would help him, having somebody to tie to."

"Now Tub," Molly laughed, "that's what I call getting out and out personal. But I don't mind, you're such

a sincere busybody. Answer A—he hasn't asked me. Answer B—he's straightened out now, if he'd only realize it. He just lacks self confidence, Tub, that's all. If he could only forget that he cracked up once, he'd be the same old Bucky I knew before he went to war."

"Maybe there's a reason for his laying low now," Bert said thoughtfully. "He's bucking the extra list and he's not getting too much work. Snapper's sort of nursing him along, you see, not giving him the heavier trains for a while. That keeps the pay checks pretty low some months."

"I never thought of that," Molly's eyes widened. "Why the big dope! As though that mattered. I'm the kind of gal who gets behind her man and boosts like a four-eight-four, and when the coal ran out, I'd start burning the cars. That big dope!" She heaved a sigh. "But you've got to be coupled before you can boost, haven't you?"

Molly dabbed powder over her freckles, slipped from the stool and brushed crumbs from her green print dress. "Well, bye, Tub! I'm off to interview the wizard of Oz, or anyone else who comes along."

ON SATURDAY morning, Tubby rolled over in bed and hoped the Cape Haddock Special had been derailed, which event would delay Harrison's arrival for at least a few hours. But the train pulled in on time, and Harrison stepped off looking more like the playboy son of a millionaire than a standard brasshat. Blinking at the light gabardine suit, panama hat, cream shirt and blue tie, Tubby extended his hand and said, "Good morning, I'm Lardner."

Junior took Bert's hand limply. "How do you do. Will you see that all my baggage is taken care of?"

Before the agent had a chance to retort, Molly presented herself, with a sly wink at Tubby. He had no choice except to introduce them, mentioning that Harrison was the Pullman boss from now on.

"Isn't that wonderful!" beamed the reporter, notebook in hand. "I do hope you'll like our little town."

"I think I shall." Harrison rocked back on his heels and smiled fatuously, quite appreciative of her copper hair shimmering in the sun, her twinkling eyes and the anatomy which the blue dress revealed. "Cape Haddock may not be such a dull spot at that. Do you like to dance?"

"Uh-huh," smiled Miss Clark demurely. "You know, Mr. Harrison, any time an official comes to town, that's an item for my gossip column. Would you give me a few facts about yourself, just in general?"

"I'd have more time," announced Junior, "if you'd have lunch with me. Then I'll give you my life history."

"I think I could arrange it," Molly beamed at him. "How about twelve-thirty?"

Watching Molly walk away, Tubby felt as though he had just introduced gunpowder to a match. Not five minutes in town and Junior was reaching out for trouble.

Late that afternoon, in the small room he called his office, the agent listened patiently to a lecture.

"Lardner," Harrison announced in his best executive manner, "your methods are old fashioned and slipshod. Since you don't keep a daily carsheet, it's a wonder to me that you know where you're at. I've watched Sampson Gypsom, your old car cleaner, and the way he loafs along is criminal. We'll probably

have to get rid of him. Then, too, you're deadheading too many cars up from Terminal City, instead of making the most of those you have on the cape. However, I don't suppose I can blame you too much. You've only been a conductor and haven't had my experience. I'll do my best to teach you, and if you apply yourself, you may make a very competent assistant."

"Thank you, Mr. Harrison," said Tubby, stifling a yawn. "You lay out a system and I'll do my best to follow it."

Having reconciled himself to a series of bombastic pronouncements and insults, Bert was more amused than irked. No use explaining that when a man's moving all over the cape he wants his car information in a notebook in his pocket, not on some fancy carsheet thirty miles away. As for the cleaner: that darky knew his business, and he'd be fired over Tubby's dead body.

"Here's what I mean about needless deadheading," declared Junior. "This chair car to be picked up at Sargasso at six p.m. tomorrow, enroute to Terminal City! You're deadheading one from there tonight, although Number 68 will pull into Sargasso tomorrow at five thirty-two, with two cars they've emptied down the line, and you could use one of those. See what I mean?"

"Not exactly. When people buy a whole car, they expect to get one. Twenty-eight minutes leeway isn't enough. If 68 got a hotbox, she'd be later than that, and 69 couldn't wait for her. We'd miss the connection and there'd be hell to pay. It's good theory, Mr. Harrison, but I don't call it good railroading." Bert saw Junior scowl, and he wished he'd been more tactful.

"Well, it's too late to change the orders anyway," remarked Harrison, closing the discussion. "By the way, Molly Clark seems to be quite a girl."

"They don't come any better." Tubby frowned. Hoping to avert trouble, he added, "She and Shaw are practically engaged."

"Bet you ten to one she doesn't go through with it," Junior smiled confidently. "I guess smalltown girls don't have many good offers, do they? What she needs is to get around more, and since we're going out tonight, I'll show her what a good time really is."

When he went to bed that night, he thought over Harrison's impact on Cape Haddock. Junior couldn't be trusted to handle cars sensibly, for one thing. Tubby's intelligence had been insulted at least a dozen times, but swallowing that was part of the job. But he was wondering how he could avoid car-cleaner trouble. The real blowup would come when Shaw discovered that the guy was making a play for Molly . . .

For one day, Bert decided, Junior had done well. Give him a week . . .

ON MONDAY Junior met the widow Clover. The dark-haired, attractive Sophronia stopped at the depot to invite Tubby to dinner that night. This was not unusual because the agent spent all his free evenings at her house, which had become the nearest thing to a home that he had known for years. There he enjoyed good food, unloaded his worries and found peace. Harrison was in the office and Bert had no choice; he introduced him.

"Mr. Lardner told me that you were coming," said Sophie. "You must find it lonely in a strange town."

"A little," Junior sighed with just enough sadness. "But I expect I'll get acquainted."

Sophie deliberated a moment, then turned to Tubby. "Tell you what, Bert," she smiled. "Why not bring Mr. Harrison along tonight. We'll spare him one lonely evening at least."

"Uh-huh!" grunted Tubby, who had been trying to avoid his boss all day long. Women did the damndest things!

Tubby lost his taste for the crisply friend scallops and hash-browned potatoes, as Harrison talked incessantly. Junior had great plans for the cape; he intended to make the place the last word in Pullman service. That would mean hard work of course; but with Lardner's help, once he'd learned the latest methods. . . .

After dinner, Harrison appropriated Tubby's favorite chair and continued to emote his wisdom. Hating useless conversation—and particularly Junior's boastful chatter—Tubby yawned and squirmed through the evening, wondering what women saw in this smug twirp. The pay-off came when Sophie accepted Junior's invitation to a movie later that week. Not that Tubby was very jealous, because he knew Sophie had a level head; but he also knew Junior would show up there again and again. So from tonight this house would be no refuge. Trumbull was right; railroading certainly made some gosh-awful demands on a fellow.

On Wednesday, Harrison fired Sampson Gypsom. When he and Tubby were inspecting sleepers on the storage track, they came upon five porters and the car cleaner on their knees in a smoking compartment, concentrating on two little ivory cubes. The crew was off duty and so committing no crime. But Sampson should have been working.

"Hotdam! Come to papa, atom bomb!" he yelped, tossing the dice just as Harrison entered. Nudged by a pal, the scrawny darky rose rheumatically. "Just one little toss, that's all, Mr. Harrison," he pleaded. "Only stopped a minute, yo' ask anybody."

"After next Saturday," grunted Harrison, "you can take all the rolls you want, because you won't be with us." Turning his back on the Negro's shocked face and the glaring porters, he strode from the compartment.

Tubby followed, cursing silently. Sampson was not only a thorough cleaner, he was the only person in town who knew the business and could handle the extra help. Tell him he had only an hour to clean a car and he'd flick his dust cloth in just the right places to make the Pullman appear clean, leaving the dirt where passengers seldom looked. He did play around a little, but he got his work done. Besides, he had a wife and two kids, all he knew was railroading, and there was another thing . . .

"I wish you hadn't done that," Bert spluttered. "He's an ex-porter who's railroaded all his life, and his pension's due in another year. He'll lose that now, and it just ain't right. Wish you'd give him another chance—I'll keep after him."

Junior stopped to eye Tubby angrily, and the agent prepared himself for a blowout.

"Sentiment and efficiency don't mix, Lardner," he snapped. "And furthermore, I'm sick and tired of having you question every decision I make. He goes and that's all."

WHEN Tubby returned to the depot he sent a personal wire to Jerry Shehan: *Can you sidetrack Gypsom discharge put on sick list until I figure angle?* Jerry could do that, since Harrison's reports passed through him. This was direct disobedience to orders, however; and unless Bert worked something fast, there might be hell to pay. Right now he hadn't even a glimmer of an idea. Scratching his head, he cursed himself for being an impetuous old fool. Where was this Junior business going to stop?

The agent spent the next two days at Schoonerville across the cape, mostly to avoid clashing with Harrison. On Thursday evening he deadheaded from Duck Creek Junction to Cape Haddock on Number Sixty-Eight, carrying three parlors with Bucky Shaw in charge. Tubby unloaded from the coach where he'd been talking with the O.R.C., and he watched the porters set down their boxes smartly and unload their passengers. When the last tip had been pocketed, Bucky finally appeared with a smartly dressed girl, both smiling.

The instant she left, Harrison was at Shaw. "Most conductors bother to unload their passengers," he snapped. "I don't see why your women won't keep till you're off duty."

Shaw grew tense. "She lost her bracelet. We found it at the last minute."

"Are you sure that's all you found?" Junior's eyes bulged. "Now get this straight Shaw. You'll railroad every minute you're over here, for I'll see that you do. There'll be none of this coddling . . ."

"You can stop right there." The conductor flushed angrily. "I don't like you, but I'll do my work and take your orders, as long as you keep clear of personal remarks. That's a warning! Otherwise . . ."

"Otherwise what?"

"Why, Bucky," Molly darted between the two glowering men. "You should have wired me you were coming. If I'd known, I'd never have promised to go out with Mr. Harrison. Why didn't you?"

"You mean you're going out with him? That . . ." Shaw clamped his mouth shut and boarded the car.

Bert turned away. The more he saw, the more disgusted he grew. What in hell was that girl up to? Bucky looked like a whipped dog when she was through with him. Good thing she'd come along though, before Bucky lost his temper. Worriedly clumping up the stairs, Bert looked over the carsheets, and he did not like what he saw for Sunday's movements.

On that evening the Cape Haddock Special was scheduled to leave in two sections, eight sleepers on the second. The Special would bring in three extras Saturday morning and Tubby would have deadheaded in the remaining five from Terminal City that night. Instead, Junior had planned to use sleepers from a troop train due at Schoonerville at five Sunday evening. Since five of those Pullmans would have to be deadheaded to Cape Haddock by nine o'clock, Junior had left only a four-hour leeway, which was nowhere near enough.

That troop special was coming clear across the continent, and one mishap to its equipment or to the right-of-way anywhere along that three thousand miles of track could delay the train for many hours. Besides, now that the war was over, troop trains could be sidetracked for

even perishable freight. Bert had an uneasy feeling that on Sunday night a hundred or more passengers might be presenting berth tickets for cars not yet on the cape.

While he was mulling over the problem, Harrison entered for his hat. "That damn Shaw. He needs lining up if anybody ever did."

"She did lose her bracelet," Bert said. "By the way, this Sunday night set-up, you sure you want it to ride? Suppose something happened . . . you haven't got one sleeper for protection."

Junior rested his hands on the table and glared at Tubby. "We may as well have this out, Lardner, once and for all. I distinctly remember saying that I was tired of having you criticise my decisions. I've handled enough cars to know what I'm doing. The trouble with you is that you're getting old and overly cautious. Railroads operate scientifically today. Be modern; stop thinking in terms of link-and-pin couplings. And stop interfering!"

"Okay, to hell with it!" Tubby rose so angrily that his chair fell over. "You can damn well run all your cars into the ocean for all I care." He grabbed his coat and slammed down the stairs.

TUBBY headed straight for Mike's tavern.

"Make it rye!"

He'd stood for all he could. He was primed to blow up, and that crack about the link-and-pin couplings had hit the wrong spot. There'd be trouble now. . . . "Another rye!" he called. Spying Bucky in a booth, Bert joined him.

"I'll show that clown!" Shaw hiccoughed. "Out with my girl . . . one insult after another . . . just because he's the boss, the big shot. But when I get through with him . . ." He held his fist under Tubby's nose. "See that, Tub? I'll murder him!"

"Don't blame you!" sighed Bert. "I'm getting old . . . too cautious. You hear that, Buck? Back in link-and-pin days! Taking orders from a punk ten years younger, with a job I'll never have, and he can't even handle mine. Because I'm link and pin. . . . Bill, bring 'nother!"

"First I'll smash his nose . . ." Shaw gulped his drink.

"Hi Tub . . . Buck!" Shorty Joe Mallin reeled toward the booth and all but sat on the floor instead of the seat. The baldheaded brakeman with the wide grin was Tubby's best friend on the cape, and a rather soused friend at present. "That damn boss of yours, Harrison," spluttered Shorty. "He wrote me up, and they gave me two days . . . brownies. One more drink and I'll turn him inside out!"

"You, too?" Lardner grunted. "What for?"

"I was flagging 71. Said I was sprawled all over the smoker, coat off. Just had my feet up, and it was hot as hell. Been out like a shot, if she'd slowed. Everybody was in bed anyway. He's a stinking louse!"

"Gemmens!" Sampson Gypsom appeared suddenly from nowhere, and clung to the table for support. "Wife's away . . . got myself night off, and I's miserable, Mr. Lardner, 'bout that ol' job."

"Yeah, it's a damn shame!"

Tubby moved over and the darky sat down. "I'm trying to swing something," he said. "Have 'nother gin. Harrison oughta be thrown off the dock."

"Murder him," mumbled Shaw.

"First class louse," grunted

Shorty, part of the drunken chorus.

"Feed him rat poison," belched Sampson.

THE next morning Tubby awoke with a craving for ice water and a foggy recollection of having been escorted home the previous night. It was his first real drunk in a long time, and he hoped Sophie wouldn't hear of it. While in the restaurant drinking black coffee, he opened his *Cape Haddock Chronical* and what he saw made him feel no better.

"Mr. James Harrison," Molly had written, "has been assigned to the cape primarily to smarten up the Pullman service. That bright young executive was chosen for this important post because of his modern views on railroading. He is scheduled to deliver a lecture at the next Chamber of Commerce meeting, on the part which a railroad with up-to-the-minute equipment could play in bringing tourists to Cape Haddock."

In the next column, Tubby saw a photograph of the old depot, taken from its ugliest angle, and the statement that it was long past the time when the Cape Haddock & Shore should have built a new one. Bert grimaced. The road would be anything but pleased about this, especially since this issue had arisen before.

"Just the opening gun," announced Molly, looking over Bert's shoulder. "We're beginning a ripsnorting campaign."

"What's the idea of building up that skunk?" grunted Tubby. "Bright young executive! I suppose that makes me a grey-haired hop toad! What are you up to, Molly? Why, Bucky was so tight last night . . ."

"As though he were the only one. I'll bet you got him drunk. Do you know where we saw you fellows?"

Tubby shook his head morosely. That "we" meant Harrison.

"Four of you on the steps of the First Methodist Church. And what you were doing to *Sweet Adeline* would make a hand organ blow a gasket, while the minister was telling you it was bed time. And you ask me what I'm up to!" Molly uttered an unlady-like snort and departed.

Tubby did not want to meet Harrison. He left a note in the office saying that he had gone to Schoonerville and caught the nine o'clock local. Lighting his old pipe, he settled down in a seat to do some heavy thinking.

As for Molly—who could figure out a woman? The newspaper article amounted to little, except that it would make Junior look like a big shot back home, and he'd do some heavy bragging around the depot. The campaign for a new station was none of Bert's business. But that Sunday night operation!

Tubby scowled out the window. That was downright dangerous, and he'd have to do something about it, even though he'd washed his hands of the matter last evening. If those sleepers failed to connect, echoes of the explosion would reach the general office in Chicago and Trumbull, not Junior, would be held responsible. The Old Man would have to answer some very embarrassing questions, since Tubby was on the cape mainly to prevent some such occurrence. And he'd promised to keep the wheels rolling.

The Cape Haddock agent was in a quandry. He had to do something; but what? Tubby couldn't stick out his neck by going over Harrison's head to Trumbull for several reasons. If the cars did connect, Junior would

rub in everything he had said, and this time with reason. Then, too, there were certain unwritten laws, particularly about squealing on a co-worker or a superior, except in desperate cases where the facts were known. And Bert was not sure of his facts.

At Schoonerville, Tubby took over the agent's phone. He learned from his friend Hammond, who was in charge of the repair shop at Manning, that a sleeper sent there for a new generator could be made ready for use Saturday night. Then he called "Snapper" Crowley, car clerk in Terminal City, and explained the situation.

"You're sending up extra parlors Sunday on 66 and 68, one for Cape Haddock and one for Schoonerville. If you were short of chair cars could you use two sleepers instead?"

"I am short," Snapper replied. "Was sending sleepers south as substitutes, but I can shift things around. And there'll be a sleeper laying over at Sharktown. That leaves you two short, but it's the best I can do."

"One short, I've got one in the shop. And don't send memos, so the twirp won't know. I'll say I forgot to tell him. Thanks, Snapper."

"Wish you'd let him hang himself!" grunted Crowley. "He crossed me up once."

WORRIED over being one car short, Tubby called several agents and asked them to issue more reservation slips and sell fewer tickets, since slip holders could be refused space with less likelihood of a comeback than could ticket holders. After that Tubby felt considerably better. True, he was double-crossing Harrison by withholding information pertaining to cars, which amounted to more insubordination; but things were in such a mess anyway that, when the final explosion did come, another accusation or two would make little difference.

Bert hired a room at Mrs. Bullard's place. He knew he and Harrison couldn't work together peaceably, and he wanted no showdown until after Sunday night. Junior knew there was work to do here. If he wanted Tubby in Cape Haddock, he could phone.

On Sunday morning, he returned to Cape Haddock. While riding the coach he happened to glance at a day-old copy of the *Chronical*. Under "New Depot Dope," Molly reported that the fire marshal had pronounced the old wooden building a fire trap, and the Pullman representative had hinted the depot was inadequate to handle today's crowds.

That guy Junior, Tubby reflected sourly, could get away with anything. Apparently it no longer paid to know your business or to follow the rules. He was doubly sure of that when he learned that the troop special had been reported only an hour and a half late leaving Terminal City, which meant that the sleepers should be available that evening, and there would be no fiasco.

Harrison rubbed it in. "You have to be on the ball these days," he announced smugly. "Times have changed. I think you understand now why I was sent here."

"Yeah, I do all right!" grunted Tubby.

Content that his plans were working out well, Junior telephoned Molly for a date that evening.

"Still no?" the assistant grumbled. "What's come over you, baby? Oh, Shaw again. What can you see in

that nervous wreck? Don't count on him, honey 'cause I may have to use him tonight."

Bert couldn't help overhearing the talk and seething at Harrison's line. Using Bucky would be unnecessary under ordinary circumstances, and would amount to Shaw's being framed. If this were modern railroading, Bert was glad to be old-fashioned.

At six forty-nine, Tubby returned to the depot after inspecting the regular section of the Cape Haddock Special and the three standard sleepers which would be the nucleus of the second. He saw the trainmaster, the station agent and Harrison on the platform, talking very seriously. "Who'd expect that to happen?" wailed Junior.

THE AGENT spied Tubby.

"That troop special's all over the ground," he yelled. "And 66 ran into the mess. Five miles from Schoonerville . . . a defective switch, they guess."

"It's pretty bad, from what I hear," said the trainmaster soberly, "although nobody's seriously hurt. I'll know better when I get there."

"So we're five sleepers short!" groaned Harrison. He looked apologetically at the men. "But it's not my fault if there's a wreck."

"God!" said the trainmaster. "You mean you didn't cover yourself?"

"Maybe we can work something." Somehow Tubby was not surprised. He'd felt trouble in his bones, from the moment he saw this move on the carsheet. Turning to Harrison, he said, "C'mon upstairs."

Junior followed Bert into the office. "Are you trying to kid me?" he blazed. "You know damn well there's not a spare sleeper on the cape. Unless . . ." His eyes bulged. "Unless you've double-crossed me, somehow, and that would be the end for you, Lardner. Well, where are they? Time's short!"

"Do you want me to get you out of this mess?" Tubby eyed Harrison with the calmness of a man who knew exactly where he stood. After tonight, he and Junior were definitely finished as working partners. Harrison would not be grateful; he'd hate Tubby's guts for showing him up.

"Yeah! By double-crossing me! All right, get the cars! We'll settle the rest later." Junior clenched his teeth.

"This is what you'll do," announced Lardner firmly. "First, you'll put Gypsom back on the payroll. He's not only a good cleaner, he's an ex-porter, and we've got a porterless sleeper coming out of the Manning shop."

"What *I'll* do!" Harrison glared. Then his manner changed, as he realized he was hooked. "All right . . . I guess there's no way out. If you can find him."

"You'll find him, because I'm going to be damn busy. He'll be in the crew car." No need to tell Junior that Tubby had told the darky to hang around. "Then you'll meet 68 and tell Shaw that we'll need him. After that, you'll stay out of my hair and let me work."

"Why you damned . . . !" Harrison slammed on his hat and collided with the door jamb on his way out.

Tubby learned from the dispatcher that the troop train's head sleeper had remained on the rails. The wrecking train was at Schoonerville now, and when that sleeper was run around the mess, it could be brought

to Duck Creek Junction with the extra sleeper used as a chair car on Number 66. That was the best the dispatcher could do, there was no time to bring the cars clear to Cape Haddock. Tubby decided not to bring the Pullman here from the Manning shop, twenty miles away, because Sampson would need every minute to make his berths. Not being a car short was a relief, anyway.

Now the second section of the Special would leave here with four sleepers, including the one due on Number 68. It would pick up a car at Manning, two at Duck Creek Junction, and one at Sharktown an hour later. The scramble for berths would be tough on the Pullman conductor, Bert knew, but—only then did he learn that the conductor on 66 had gone through a car window in the pileup, and had dislocated his shoulder. Tubby himself would have to work the train, with Bucky as helper.

SAMPSON appeared, his lugubrious face almost smiling. "Hotdam if yo' didn't work it!" he blurted. "Yo's a right smart man, Mr. Lardner, yo' sure is." The darky scratched his head. "But Mr. Harrison wasn't zactly what yo'd call cordial, no suh."

"If you think you're in the doghouse . . ." grunted Tubby. He gave Gypsom his taxi fare and sent him off to Manning. Hearing Number 68 whistle late, and not having heard from Harrison, Bert went downstairs to make sure that Shaw would receive his instructions. He met Harrison on the platform and guessed from his flushed face and his bright eyes that he had been across the street to Mike's. Not that Junior was pie-eyed—merely a couple of degrees off the beam.

"I'll handle Shaw," Harrison announced. "I'll give him his orders."

Junior hardly waited until the crowd had thinned before he scrambled up into the car, where Bucky had just straightened out a misunderstanding with the train conductor. Snatching the *okay* slip from his fingers, Harrison turned on him.

"You're going back as helper on the Special!" he snapped. "This is one dull evening that Molly will be spared."

Shaw stiffened and his cheek muscles twitched angrily. "So you drag her into it now," he blazed. "Not satisfied with rubbing my nose in the dirt. You've done nothing but ride me, Harrison, and it's going to stop. And keep Molly out of it, or I'll forget that you're my boss."

Two inches taller and much heavier, Harrison placed his hands on his hips and leered confidently. "Are you threatening me, Shaw?"

"I'm just telling you, that's all. And I don't care what you make of it. I'm fed up."

"This is what I'll make of it. You're finished on the cape. We can't fool around with nervous wrecks . . ."

"That does it!" Shaw's right whipped upward and Junior's nose blobbed back into his face. While Harrison was still reeling, Shaw's left thumped into his padded ribs and his grunt was heard a car length away. Harrison undoubled himself, lowered his head and charged, his fists swinging like sledge hammers. But Shaw wove, danced and lashed; and when Tubby, a town cop and two porters had separated them, Junior was a mess. Blood from his nose was dripping onto his white shirt, his left eye was closing, both cheeks were raw, and something had happened to his teeth. The panting

"I know what I want, officer." Harrison spat out blood, and leaned weakly against the Pullman. "Take him."

The cop turned to Bucky. "Come along, lad."

"Sure," Shaw agreed. "It was worth it."

SHAW'S fist whipped upward and Junior's nose blobbed back into his face

Bucky, however, seemed untouched.

Harrison dropped his bloody handkerchief and grabbed a towel from a porter. He turned to the cop.

"I want this man arrested. You saw him attack me, and all these people are witnesses. I'll go along and press the charge."

The officer hesitated. "You sure you want to do this, Mr. Harrison? I've got to do it if you insist, but maybe when things have cooled off . . ."

DISGUSTEDLY Tubby clumped up the stairs and telephoned Judge Saulter to learn if Shaw could be bailed out. Informed that the judge was out of town for the week end, he sighed heavily. Bucky had gotten himself into a serious jam. Not only would there be a fine and probably a short sentence, but Trumbull would have to suspend the conductor, whether he actually wanted to or not. He couldn't afford to endanger the discipline of his district

by permitting men to make mincemeat of their superiors while on duty and in a public place. Shaw would probably get a month, while Harrison made time with Molly.

Bert would have no helper tonight, and this scrambled train would be too much for one man to handle. He'd most likely be answering complaints for weeks. Tubby shrugged. He'd do the best he could.

At nine fifteen, after the first section had left, the four sleepers and two baggage cars were pulled into the depot. Passengers with tickets for space, scattered through the scheduled eight cars, rushed for the train. Not even the explanations of Bert, the train crew and the patched-up Harrison could convince people that eventually there would be enough berths.

Five and ten dollar bills appeared, which Tubby could not accept. Women clamored about sick babies, having lame backs and being under doctor's care. Others declared they owned stock in the road and Bert would hear from them. But the conductor worked fast and impartially, assigning passengers with tickets for the missing cars to berths belonging to stations along the line, and five minutes before departure he had begun to bring order from chaos. Then he fell over the suitcase.

It happened while he was trying to talk to three people at once. He stepped backward and tripped, spun on one foot, fighting for balance, and then sprawled headlong. After getting his breath, he discovered that his ankle hurt. It might be sprained, or it might not. Suddenly he decided that this was not the moment to find out, because his spill could be turned to damned good use. When Bill O'Rourke, the O.R.C., and a passenger lifted him up, Bert let his ankle double under him, grimaced as with great pain.

"Get me into the baggage car," he told Bill. "Never mind a doctor now, that can wait. I know I can't walk, so I've got to get you another Pullman man. But I don't think you'll have to hold the train too long. Where's that guy Harrison?"

Some minutes later Junior showed up at the baggage car door. Tubby was now seated on a trunk.

"A fine mess!" he grieved. "And I know what you're expecting. But do you realize that the only way I can get Shaw out of jail is by withdrawing my charge?"

"That's a shame," said Bert, who then had another inspiration. "And it's too bad you can't report this fight to the office, too, because then you wouldn't get the credit for having some cars in reserve tonight. There's the chief of police over there. He won't want to delay the train."

Watching Junior approach the chief, Tubby reflected grimly that after tonight Junior should have a fair idea of how humble pie tasted.

THE SECTION departed twenty-five minutes late, with Bucky in the baggage car.

"Keep filling up the berths regardless of what station they're assigned to," Tubby said. "Never mind what space the ticket calls for, just get people to bed as they come aboard. By the time we pick up that Sharktown car, nobody should have been waiting up very long. You'll probably go nuts, keeping track of things and cutting checks, but do your best and we'll sort things out someway. Keep sending me transportation as fast as you pick it up."

No sooner had Bucky left than

Molly appeared, with a roll of bandage. "I'll tape your ankle," she said.

"What are you doing here?"

"Just out for the ride," she smiled. "You know, Tub, I've got a horrible suspicion, this ankle isn't swollen at all."

Bert wriggled his foot. "You put that bandage on and keep quiet, Molly. This ankle has got to be sprained for a while yet."

The train made stop after stop and porters kept appearing with tickets and cash-fare checks. Tubby entered them on the diagrams, watching for any confused or duplicate markings which would indicate that Shaw was losing control. Two minor jams occurred, but both were ironed out quickly; the train crew reported few people waiting for berths and no confusion through the Pullmans.

Shaw himself came in leaving Sharktown, perspiring freely and appearing slightly dazed.

"Whew!" he groaned. "What a madhouse. The funny thing is, I wasn't nervous at all. Guess I forgot, I was so busy."

Bert grinned at Bucky. "Anybody who can work this train and keep it straight can take the worst workhouse that Snapper can throw at him. I'm going to tell him to take you off the kindergarten list."

"Now I get it!" Molly looked at Tubby's bandaged ankle.

"You hear that, Molly," blurted Shaw. "Now I'll be getting enough work. There's even a side of Number 68 open. Now maybe . . ."

"Maybe what?"

"Look here," Bucky reddened and gulped. "What gives with Harrison?"

"Well, if you must know, he wants to marry me." Molly paused for this to take effect. "But I turned him down, even though we smalltown girls don't seem to have many offers."

"If you're looking for offers . . ." Bucky grabbed her by the shoulders. "I've been pretty dumb, Molly."

Just like a clinch in the movies, thought Tubby, as he and the grinning baggageman looked tactfully out the car door. Well, that had worked out fine, anyway. And with Junior not daring to turn Shaw in, and Sampson back on the payroll, Bert found consolation in the fact that he'd salvaged something out of the mess before leaving the cape.

Twenty telegraph poles later Bucky broke loose, remembering that he still had a train to run. On his way out he thrust an envelope at Tubby. The letter was from Shehan.

"Nice going, Tubby. Harrison is being recalled to Chicago. He can never work on the CH&S again, by special order. The road claims he stirred up quite a rumpus about a new depot, and they used a couple of newspaper clippings to prove their point. Was this your idea? I wouldn't put it past you!"

Instantly, Tubby Lardner felt as though ten tons had been lifted from his mind. "Read this!" he chuckled, jumping up to hand Molly the letter.

"Your ankle," she squealed.

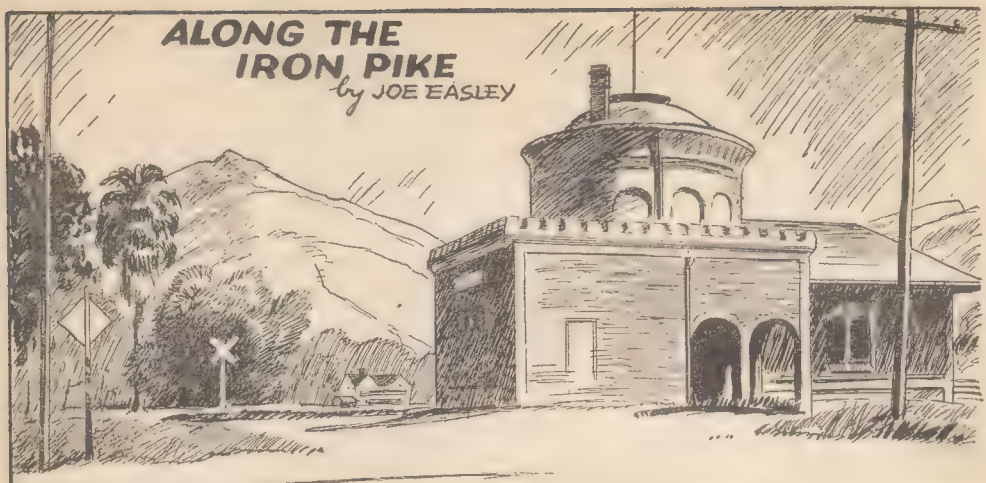
His ankle, he discovered, hardly hurt at all. "There's a couple of questions, Molly," he said. "Did you play around with Junior to get Shaw good and mad, and wake him up?"

"Could be," she said.

Bert grinned broadly and sat looking out the door, listening to the rumbling of the wheels. The Old Man would never know how nearly they had come to stopping for a while, and Bert would get no particular credit. But keeping 'em rolling was a railroader's job, not chasing after glory.

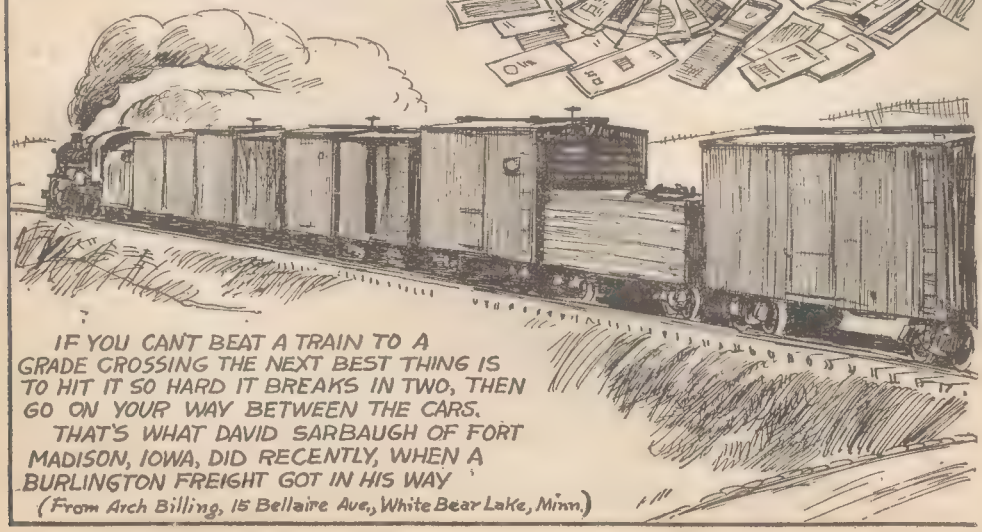
ALONG THE IRON PIKE

by JOE EASLEY



WHO KNOWS THE REASON FOR STRANGE ARCHITECTURE OF SANTA FE'S PATTON, CALIF., DEPOT? OUR EX-G.I. ART DIRECTOR SAYS IT SUGGESTS SAUDI ARABIA
(From C.T. Steeb, No. 9 North 30th St., Billings, Montana)

TIMETABLE COLLECTOR ROBERT S. ASH, 1526 W. CLIFTON AVE., CLEVELAND, O., DISPLAYS A FEW OF HIS NINE HUNDRED FOLDERS, COVERING TRAIN SCHEDULES ALL OVER THE WORLD. EARLIEST IS CHICAGO, IOWA & NEBRASKA ITEM, DATED APRIL 15TH, 1840. ASH; AN ELECTRICIAN AT NEW YORK CENTRAL'S LINNDALE ROUND-HOUSE, MODELS RAILROAD AND TROLLEY EQUIPMENT AS A SIDELINE
(From New York Central Headlight)



IF YOU CAN'T BEAT A TRAIN TO A GRADE CROSSING THE NEXT BEST THING IS TO HIT IT SO HARD IT BREAKS IN TWO, THEN GO ON YOUR WAY BETWEEN THE CARS.

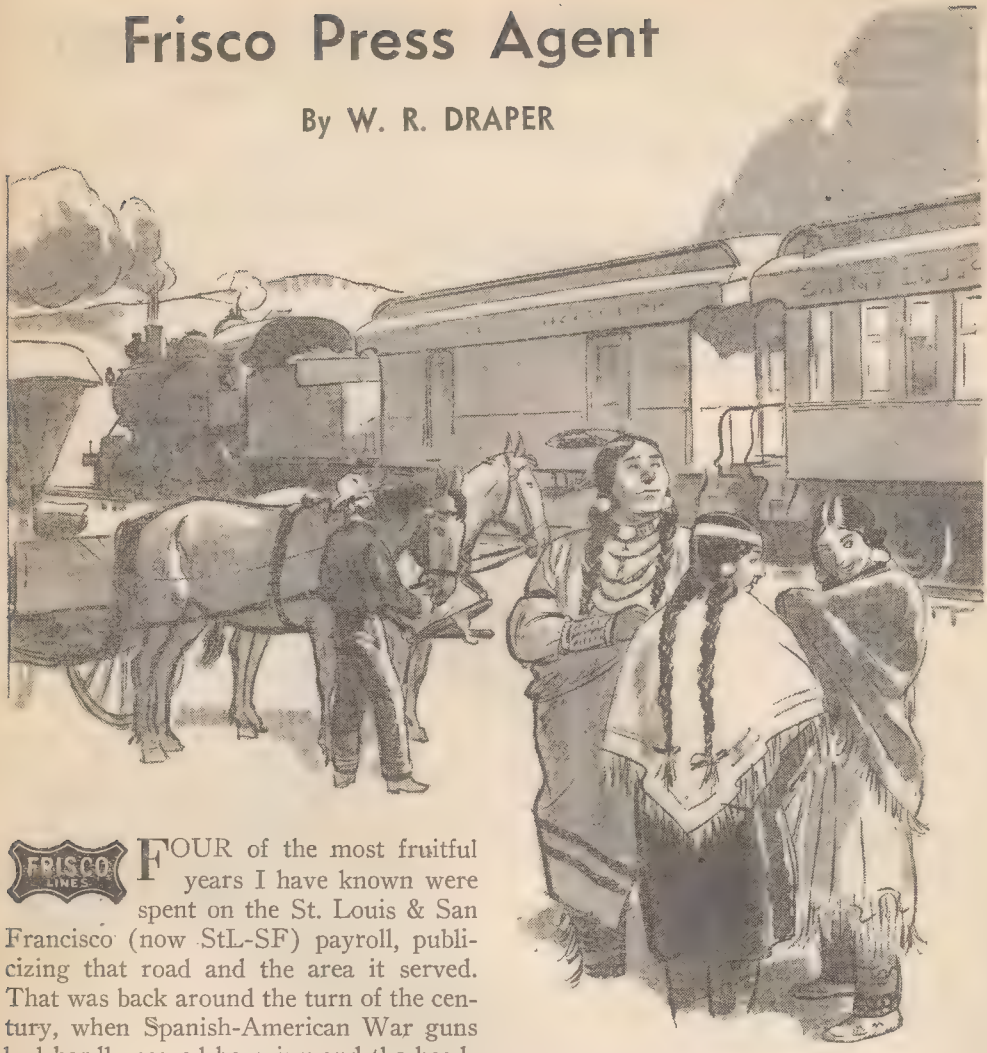
THAT'S WHAT DAVID SARBAUGH OF FORT MADISON, IOWA, DID RECENTLY, WHEN A BURLINGTON FREIGHT GOT IN HIS WAY
(From Arch Billing, 15 Bellaire Ave., White Bear Lake, Minn.)

GREAT WESTERN RAILWAY'S **GARTH HALL** WAS FIRST LOCOMOTIVE ON THAT LINE TO BE CONVERTED INTO OILBURNER IN ANTICIPATION OF THREATENED COAL FAMINE THIS WINTER, TWELVE HUNDRED BRITISH ENGINES ARE SLATED FOR THE CHANGEOVER (From John Drayton, 13 Sycamore Road, Griffithstown, Pontypool, Mon., Eng.)

DOWN MAIN STREET OF MILLEDGEVILLE, GA., CHUFFS GEORGIA RAILROAD MOGUL 454, SWITCHING FREIGHT BETWEEN THE ROAD'S DEPOT AND GEORGIA STATE HOSPITAL. PASSENGER TRAFFIC IS HANDLED BY BUDD RAIL BUS (From Eugene A. Ellis, 603 W. Greene St., Milledgeville, Ga.)

Frisco Press Agent

By W. R. DRAPER

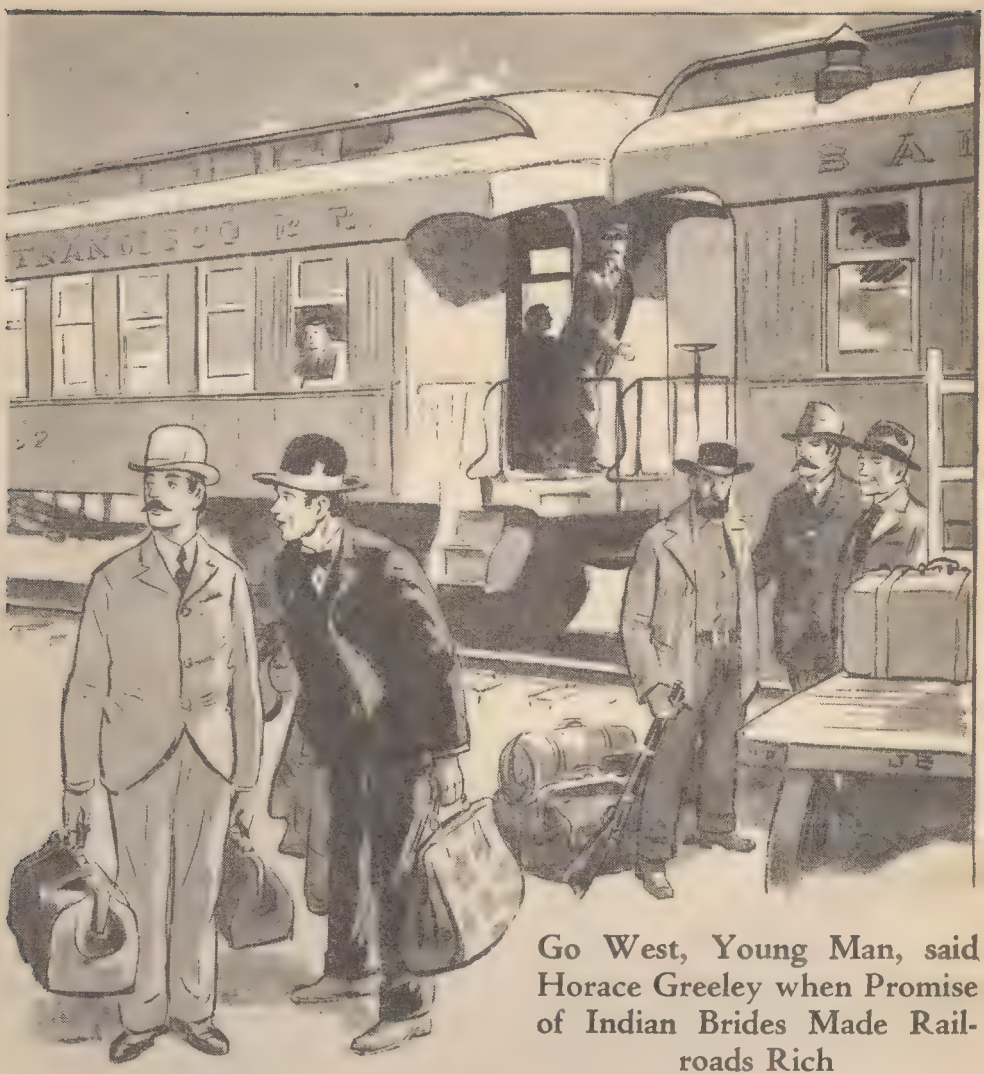


FOUR of the most fruitful years I have known were spent on the St. Louis & San Francisco (now StL-SF) payroll, publicizing that road and the area it served. That was back around the turn of the century, when Spanish-American War guns had hardly ceased booming and the headliners included Teddy Roosevelt, Jim Hill, B. F. Yoakum, Anna Held, and the Florodora Sextette. If curiosity prompts you to keep on reading, you will learn how a railroad press agent fared in that fabulous era.

Maybe you want to know how I got that way. The answer is brief. At the tender age of fourteen I began to work as a printer's devil and later became a full-blown printer. The chore of setting type taught me how sentences were formed and news features constructed. In a few years, without further education or training, I started to grind out copy for publication.

My earliest writing field was Indian Territory. A reporter on the old redskin hunting ground, no matter how raw he might be, could make a fair living merely by opening his eyes to the fact that he was knee-deep in front-page source material. The Territory boasted exciting events every day, including Sunday. I would cover these happenings for certain newspapers in St. Louis, Kansas City, Chicago, and as far east as New York.

About the time hair first showed on my upper lip, I hankered to work in a big city, preferably St. Louis. To bring about this desired condition I sent copies of some of



Go West, Young Man, said Horace Greeley when Promise of Indian Brides Made Railroads Rich

my Indian articles to the *Frisco Magazine.* The StL&SF advertising manager, a wise soul named Robert Heed, replied by mail that he was amazed at the numerous opportunities presented to white people in Indian Territory, as my features indicated.

"Give us more," he urged. "This is great stuff to attract settlers."

So I bought a new ribbon for my cumbersome sixty-pound typewriter. The wilderness that has since attained statehood was then in process of being pried open to white homesteaders. "Sooners" who could beat the lifting of legal barriers were almost certain to reap a rich harvest. For each write-up Mr. Heed accepted he sent me a thousand-mile travel-coupon book, issued in my name but actually saleable. I sold these books at twenty to twenty-five dollars each to traveling gents who visited my father's store. As the Frisco took one or two articles a week, I soon became flush with wampum.

Meanwhile, I kept up my regular news correspondence and managed to sell the *New York Tribune,* for instance, several full-page illustrated features. One that attracted much attention in Washington

shed new light on the "squaw men," a class of whites who married Indian girls, about which I will tell you later.

With these modest triumphs as feathers in my war bonnet, I summoned courage to visit Mr. Heed at St. Louis. Picture a callow youth from the wide-open spaces barging into a large, noisy, busy city, attired in high-water pants, flowing bow tie, and a wide-brimmed straw hat! Unloading at St. Louis Terminal, I rode a streetcar uptown and soon was ushered breathlessly into the sanctum at Fourth and Olive streets. After we had chatted a while, Mr. Heed said:

"Draper, how'd you like to write about opportunities all along the Frisco? We serve thirty-five hundred miles of country, you know."

"I'd like it, Mr. Heed," I answered quickly, "but can I do it?"

"Sure, you can. You write good boom stuff."

While we sat discussing this, the boss sized me up critically from head to foot. he himself was dressed in smart city fashion, I as a country jake. At length he came out with it.

"Say, Draper, take your first expense check, step across the street, and buy yourself a new suit and hat. We like our men to appear neat."

That afternoon I acted on his tip. When I shed that Indian Territory outfit I lost a lot of greenhorn feeling. It was just what I needed. Besides a regular salary and expenses, I received a card entitling me to ride free in Pullman cars, day or night, a half-rate meal ticket at certain hotels, and other privileges, all of which made me feel important. I bought a special wallet to hold those passes. What a job this will be, I thought, as I swung my typewriter aboard a Frisco train headed for the Southwest.

I WAS GONE a long time. For the first month or two I mailed three articles a week to the advertising manager. Then he ordered:

"Get some of these stories printed in the Dallas and St. Louis papers, where they will be more beneficial to the Frisco than if we used them in our own publications."

Not until then did I grasp the fact that I'd been hired as a press agent. I recalled how pleased Mr. Heed had been with the stack of newspaper clippings I had shown him, clippings of fact stories about Indian Territory. And so I set to work on a broader scale.

I wrote about chicken farms and goat ranches in the Ozarks, fig orchards and berry fields in the Texas Gulf Coast region, pecan groves and sheep herding in western central Texas, and other pieces about rural life. These articles appeared in *Farm Life* and *Breeders' Gazette,* in the *Chicago Tribune* and the *St. Louis Globe Democrat.* Also *Collier's, The Saturday Evening Post,* and even the sedate *Christian Herald.* I wrote them to call attention to natural resources of Frisco territory, often without mentioning the railroad's name. At the same time I supplied the press with photographs, at the railroad company's expense, and pocketed all the money I got from editors. The boss agreed to this rakeoff. He declared it was worth that much more to the Frisco for general publicity purposes.

After six months on the road I went back to St. Louis with a bag full of unwritten material, which I then typed into *Frisco Magazine* articles. Mr. Heed was so pleased with my work that he gave me two weeks' vacation on salary, although the whole trip had been a sort of vacation to me. In my free time I returned to Indian Territory, visiting relatives and friends. One of the latter was a dusky Cherokee girl named Annie. She and I got talking together.

"Some day," I bragged, "I'm going to be a circus press agent. Those boys draw good money."

Annie was not impressed. "What do you know about elephants and tigers, Bill?" she replied sagely. "You'd do better by sticking to stories about Indians and the Southwest."

This, I decided, was good advice. If Annie is alive today and reads this tale,

I want her to know that I never did follow the big top, thanks to her suggestion. The rush of events pushed it out of my mind. When I got back from vacation, a sylph-like toe dancer billed as Genee was holding forth at the Century Theater in St. Louis. The young lady had charm enough to breed romantic notions, but Mr. Heed considered her coldly from the ad viewpoint. Accustomed to tying in local events with the Frisco, he wanted to know:

"Can you figure out how Genee might like to own an Ozark chicken farm?"

That query had me stumped. I could visualize the terpsichorean artist in gorgeous settings but not in a sunbonnet throwing corn to a flock of Rhode Island reds. However, the Century's publicity man, Charley Cavanaugh, was a friend of mine. I hiked over to his dugout and he led me into Genee's manager. There I stated my case.

"Don't see how we can get that gal down on the farm," the manager said dubiously, "when she's making so many fellows leave it and come to the bright lights."

He sent for the toe dancer. Genee swished into the room with a bright smile. The girl herself was an eyeful in any man's language, but I found it hard to savvy her accent. They claimed she was French. Charley took the claim cynically. "She's a hill-billy," he decided. Just the same, Genee knew the value of the printed page.

"Why, yes, Meestaire Drapier," she cooed, "I just adore eggs. Why not send me six of them every day fresh from the Ozark poultry farm of the beeg Freesco Railroad Company? I will eat them and you can write your story about me."

Thus I created my first real press-agent yarn. I made it appear that the dainty Parisian danseuse on tour demanded high-protein eggs, of which the Ozarks produced the world's finest. At great cost and to aid Franco-American goodwill, the Frisco was speeding half a dozen freshly laid eggs on its fastest train direct to St. Louis every day. The hen fruit was delivered in style. A colored porter whose uniform carried a Frisco emblem took it to her hotel room.

We put across this stunt in fine shape. The story got on the wire. Of course, the hard-boiled Associated Press staff knew it was "cheesecake" but they welcomed occasional items of that nature.

SHORTLY AFTERWARD, when Anna Held, a genuine French actress and singer, came to St. Louis, the local press divulged the "secret" that Anna took milk baths in her *de luxe* suite at the Southern Hotel. This laving, discreetly performed, was viewed by reporters and press agents. I squeezed in on one such occasion. Talking with Florenz Ziegfeld, her manager and future husband, I suggested shipping milk to her from an Ozark dairy farm. Flo rejected this idea. As we left the scene, Charley gave me the horse laugh.

"Don't you know that ain't milk?" he guffawed. "It's just colored water. But for Pete's sake, keep it quiet!"

My next assignment seared me with a painful memory. This section will not be nice reading for anyone who loves horses, as I do. Mr. Heed sent me to Rogers, Ark., to write up the first big commercial vineyard in the Ozarks. The land, the climate and the soil, according to Frisco horticultural agents, combined to make the place a grape-growers' paradise. This vineyard, operated by Carl Starck, offered a rare opportunity for Frisco publicity.

At Rogers I hired a livery team and drove six or seven miles across the low hills to the Starck home. Then, hitching my team to a post near the barn, I walked around with Mr. Starck to inspect his vines, opulent with bunches of juicy fruit, which mantled the hillsides. We had not gone far when a terrible cry assailed our ears. From the spot where I had left the team came excited sounds of snorting and screaming.

"Good God!" exclaimed the ordinarily placid German vintner. "Your horses must have broken loose and kicked over a beehive!"

He was right. We ran back as fast as

we could through the vines, but arrived too late. The poor creatures had fallen to the ground and were being stung to death by thousands of angry bees. The sight curdled my blood. Nothing we could do would help those horses. Absolutely nothing. Automatically I turned my head away and held hands to ears in an effort to shut out the horror. Ever since that day I have hated bees. I've had several requests to write stories about the busy little honey-makers and have turned them all down.

But life goes on. Among Frisco employes at that time, none commanded more respect than our affable land commissioner, Colonel Samuel A. Hughes. The Colonel had the manners of a grandee and the memory of an elephant. B. F. Yoakum, our president and general manager, decided to utilize the Colonel's talents in persuading a larger share of the nation's foreign immigration to settle under the Frisco's wings. Hughes looked into the matter. A few weeks later he reported:

"The immigrants now swarming into America are not the class to occupy farm country. They're mostly factory hands and miners. We want men and women who till the soil."

"Then get them!" ordered President Yoakum. "Go to Switzerland, Belgium, Italy and France, and lure them over here. We need them."

The Frisco's publicity mill got busy. I had dozens of articles printed on this subject. Hughes dug up by the roots hundreds of Old World farmers and trans-

The hen fruit was delivered to the dancer in style

planted them on Frisco acreage. Nearly all of these colonies succeeded, because the Colonel brought the right kind of people, working entirely through European churches instead of land agencies.

His most ambitious project was placing a couple of hundred Italian families near Rogers. There the immigrants planted grapes and made wine under the leadership of Father Bandini, a priest. This colony, now more than fifty years old, is still flourishing. Most of the original settlers are dead, but their children and grandchildren are loyal Americans and stick to the wine-growing business. Another colony of grape growers, these being Swiss, was established along the Frisco Lines at Brandville, Mo., and still carries on effectively.

FOR SOME TIME Hughes toyed with the idea of importing long-haired goats and goat raisers from the highlands of Europe to the Ozarks foothills. I read up on the Angora goat and satisfied myself that here was a sturdy beast that would make money for its owner. So I wrote and had published in the *St. Louis Globe Democrat* a whole-page feature about the "Angora goat-raising industry in the Ozarks"—before a single Angora or goat herder had set foot on our rocky foothills!

After many rounds with the Federal Government about bringing in a quantity of foreign animals, and after much coaxing of the temperamental goat raisers, Colonel Hughes set up a few small goat ranches along the Frisco between St. Louis and Rolla, Mo. But it did not take long for us to discover that these fine-haired creatures were not the right species to fight the local underbrush, coyotes and hound dogs; and so the Frisco dropped the project like a hot potato.

The best railroad cusomers for our territory, we decided, were native American farmers. We just had to coax them to leave other parts of the country and settle with us. So I began turning out stories about wheat growers and stock raisers making good money along our lines. By shining examples I aimed to show others what they were missing by not living in our territory.

"By far the richest class of farmers in the United States," I wrote grandiosely in the *Frisco Magazine*, "are those living in Kansas . . . Life on the Kansas farm is one continuous round of industry, although the country people do have time to enjoy themselves . . ."

In 1901 Kansas was so prosperous that farm owners were having trouble to hire enough men to harvest the crops. I prepared an article on this scarcity which ran in *The Saturday Evening Post*.

"David W. Blaine is a well known Kansas wheat grower," I wrote for *The Post*, "but his principal claim for recognition as a captain of Western industry is that he has organized an industrial system for furnishing harvest hands to the farmers of Kansas and the Middle West that rivals free employment bureaus maintained by the Government. Mr. Blaine's work is entirely without personal gain. He furnishes from 15,000 to 30,000 workers every summer to the wheat growers . . ."

The Frisco's advertising boss, Mr. Heed patted me on the back for high-lighting the Sunflower State, which was—and is—well served by the Frisco. I gleefully counted the sums received from these articles. Compared to modern standards, they were not large, but seemed plenty big enough then for a kid from Indian Territory. Thus encouraged, I selected the vast 101 Ranch, in northern Oklahoma, and managed to get articles about it printed in *The Post, Collier's, New York Sun,* and other moulers of public opinion.

"In the business conduct of the 101 Ranch," I stated, "lies a lesson which may prove profitable to farmers and stock raisers throughout the nation. This ranch may be seen as one approaches northern Oklahoma via the Frisco System. The ranch is not owned by its managers, as the land belongs to the Ponca and Otoe tribes of Indians, and is leased by the year. George W. Miller and sons are the lessors. The Miller family pay the Indians $22,500 cash each year for use of the land. Besides this cash, the Millers also present the Indians

with many gifts of horses, blankets, etc. They also employ all the Indians who will work for them.

"Thirty-seven thousand acres, surrounded by 100 miles of fence, furnished and kept in order by the Millers, lies in one main body, level as a floor and rich as cream. Here 8000 acres is sown to wheat, 3000 acres to corn, 1500 acres to sorghum, 1500 acres to oats . . ."

Mr. Heed often said he marveled at the rapidity with which I covered the territory and whipped up articles and pictures. But one day he remarked:

"Maybe we'd better give the farm stories a rest. Get back on the Indian yarns. They're sufficiently unique to attract tourists."

SO I RETURNED to my first love, Indian Territory, to hunt for colorful material about the redskin and his new neighbor, the paleface. White people were crowding Indians against the ropes. My father and other oldtimers told me that in a few years the aborigines would be sitting outside their tepees while the white would be inside, eating at the first table. How true this has since turned out to be! At that time, whites by the thousands were jamming the trains into land held by every one of the Five Nations, seeking here and there to find a copper-hued wife, so they could get on the tribal rolls and eventually share some of the wealth about to be divided *pro rata* among all the members.

Here was a story. I queried Morril Goddard, editor of the *New York Sunday Journal*. He promptly wired acceptance. After browsing around in Muskogee, I sent my article from that settlement.

"Brides for the asking," I wrote. "And with each one a dowry that would make the average man feel like a Vanderbilt. That is what the white man who now comes to the Indian Territory meets with. It is a fascinating situation to him who seeks a rich wife. From the number of white men on the ground it would seem also that they are going to take advantage of it.

"The Indian Territory is now witnessing the end of tribal rule and the land is being alotted rapidly. The U. S. Commission to the five civilized tribes has nearly finished making the tribal rolls of citizenship and they will soon close the books. That is why you must hurry, for if you don't get your name on the citizenship rolls, you are not an Indian.

"The Indian woman may set you a merry pace after you marry her, but she is worth the trouble. The path of courtship now leads to Indian Territory. Gallants of all kinds are crowding the trains. Some of the railroads, notably the Frisco, run special trains into the Territory to accommodate the wife-seekers . . ."

This story went over big. Mr. Heed said that as a result of it, traffic at once increased into the Cherokee, Creek, and Seminole nations.

"Now try something else," he advised.

That was life. Always something else. The public gets fed up if you plug the same subject too long. So I dished up a story about a real innovation, an Indian baby show. Promoters of that show used considerable tact in winning the squaws' consent to such an exhibit. Details were grist for the mill. They aroused further interest in Indian Territory and boosted our passenger business.

Thus it went, one stunt after another. At the end of four years I knew the Frisco so well that it no longer had novelty value. New publicity ideas would not spring up as fast as I thought they should. One day I mentioned the problem to my father while I was visiting his trading post in the Cherokee Nation. He told me:

"You'd better quit now, Bill, while you still like the job. Change of scenery will do you good."

The old man followed that practice in his own business, moving the store to a new site as soon as he felt his customers' faces had become too familiar. This constant shifting to fresh pastures he regarded as the secret of his success with the redskins. I liked his odd philosophy. Although I was doing all right on the Frisco, I kissed them good-bye and hit the boomer trail.

Electric Lines:

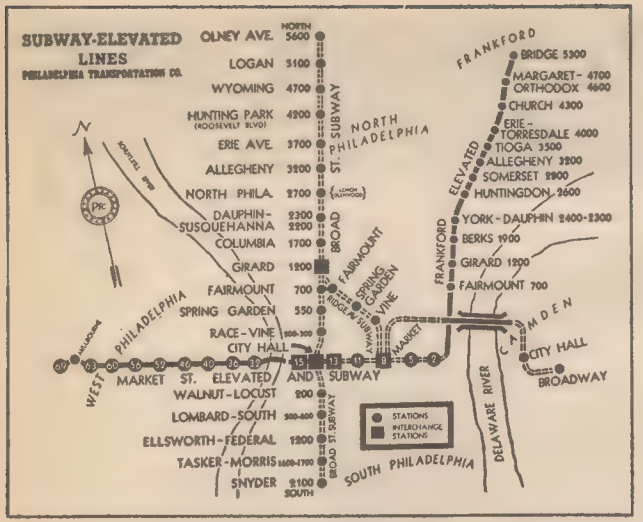
High-Speed Operation In Large Cities

By L. E. SUMMERS

More Than Efficient Thirty Years Ago, Subway Designs Fall Short of 1947 Crowding

MASS TRANSPORTATION by subway and elevated has its own peculiar problems, more basic than the recent labor troubles and equipment troubles. "Why don't they run more trains?" groans the punch-drunk subway commuter, battered and shoved along the station platform until heremetically sealed in the metal car. But what Johnny Q doesn't know is that there's nothing simple about keeping the subway trains moving. Handling traffic on two or four track lines requires long experience and constant alertness. Often even these cannot prevent delays.

There are only four cities in the United States which operate subway and elevated lines of any considerable extent, independently of bus and surface cars: Boston, New York City, Philadelphia and Chicago. There, high-speed operation has developed to an extent not realized by the average citizen and by operators of other forms of transportation. Its growth is also far beyond the vision of the designers and promoters of the original lines. Techniques have been developed to suit specific conditions, resulting in varied methods. In discussing operation of the Philadelphia Transportation Company's



subway-elevated lines, no comparison of methods found effective in Philadelphia can or will be made with those of other cities.

Four high-speed routes are operated in Philadelphia: Market-Frankford division comprising 12.8 miles of one-way runs with twenty-six intermediate station stops, covered in forty-four minutes; Broad-Camden, 8.0 miles of one-way runs, seventeen stops in twenty-six minutes; Ridge-8th, 1.5 miles with three stops in five and a half minutes; the 2.6 mile Camden line over the Delaware River Bridge, one stop, seven minutes. Market-Frankford division uses 315 cars to Broad-Camden's 2261 units, all equipped with motors; and trains can be operated by one motorman from any cab in the train. The multiple-unit door control permits opening and closing by one conductor, from any cab on the side where doors are to be manipulated. Automatic air brakes are controlled electrically and pneumatically.

Philadelphia trains are bound to leave the terminal at one end of the line and arrive at the opposite terminal on definite schedules. Except in a general way, motormen are not governed by intermediate time points. They are only required to make their runs in the carded time, determined by traffic conditions and speed restrictions on the various sections, with due regard to signals, and power-off and braking signs, installed en-route for their guidance.

High-speed operation is probably the only type of public transportation in which trains are scheduled in fractions of a minute; and to the motorman, a quarter minute is a large-sized chunk of time. Steam operators may be surprised that there are no intermediate time points designated, for on their roads each station and junction is an individual time stop. However, in high-speed running the main objective, as far as efficient transportation of passengers is concerned, is to have trains moving at uniform intervals through heavy traffic sections. This has been best accomplished by adjusting terminal time and total running time according to frequent checks.

TO ASSIST in obtaining the required uniformity of service an automatic dispatching mechanism was developed in the company's signal shop. Two of these ingenious devices have been installed. One is operating at 8th Street westbound station on Market Street line, first congested station in the nightly rush period; the second is at Broad Street's City Hall northbound station, first heavy station on that road. These machines automatically dispatch trains from the stations where located on scheduled time, if operation is normal; if the line is delayed, they will space the trains so that they do not run too close to each other. The robot dispatchers have worked wonders in the uniform distribution of passenger loads during rush hours, and in maintaining even headways.

Delays and blockades are the greatest headaches of the high-speed operator. The staff makes every possible effort to prevent service interruptions which cause complaints and loss of revenue. In the recent war years, avoidable delays were not tolerated, since they would affect the movements of the large proportion of de-

fense workers who depended on the urban services.

Although in local instances headways may be somewhat shorter, it is a generally established fact that with safe signalling for long distances and the limitations of crossover movements at terminal points, trains can be operated at maximum average and safe speed on a minimum of two minute headways. This minimum headway may extend over a period of only a few minutes or may be maintained for an hour or more during times of heaviest traffic. Many subway and elevated lines were designed and built thirty or more years ago—at times when the ultimate demands on the service were not realized. As a result, cars are not large enough, nor numerous enough; station platforms are too short to accommodate longer trains; and track, motive and substation capacities are insufficient to handle the loads that would otherwise be imposed upon them by present day requirements.

For many years one of New York's subways has been compelled to operate ten-car trains at stations built only for six. This is just one of the operating man's headaches. Others are shortage of equipment and track capacity to handle a sufficient number of trains. In Philadelphia, war traffic increased about fifty percent over the previous record, requiring an increase of forty-five percent in car miles, with no addition of cars or of track facilities and little increase in personnel.

One important advantage that high-speed running has over surface operation is the possibility of addition or reduction of the number of cars per train as traffic fluctuates without changing the number of scheduled trains or crews. Frequent traffic checks are taken to determine service requirements. On surface lines—trolley, trackless trolley and bus—each additional vehicle added to the normal schedule requires an additional crew or operator. With present scarcity of labor this presents a formidable problem. In high-speed service, however, trains may consist

UPPER DARBY terminal at 69th Street, shared by PTC's Market line, together with Lehigh Valley Traction and Philadelphia & Western. ***Foreground:*** Market St. el, P&W Stratford branch car in rear

of one to seven cars; regardless of the number a crew of only two men is required for each train.

According to length and width, the capacity of cars for standing and seated loads may vary from one hundred to two hundred fifty passengers per car, yet due to reluctance of riders to distribute themselves uniformly in the train, the average car loading may be fifty to seventy-five percent of total maximum capacity.

LENGTH of station stops may vary from ten seconds during light load periods to thirty or more at peak hours. With a thirty-second stop in two-minute headway period, one train will be running only one and a half minutes behind its leader. This requires close operation, still not too close to risk collision. Here enters the design of a safe but flexible signal system, one that will keep trains moving while sufficiently apart and controlled in speed to insure safety. Track trips, designed to apply emergency brakes if trains run too close, help guarantee this, as do speed control signals.

The value of a few seconds in the spacing of trains during rush hours can best be explained by the following: At such periods, passengers arrive at each station in the congested areas at fairly uniform rates, and trains are scheduled at sufficiently close headways to pick up those who have crowded at each stop between the departure of one train and the arrival of the following. Assume a scheduled headway of two minutes—120 seconds—with a train fifteen seconds late. At the heavy station, the number of passengers waiting to board the cars has increased from the normal accumulation of two minutes to that of two and one quarter minutes—135 seconds—or an increase of 12½ percent normal number.

Naturally, it should take a few extra seconds for the additional passengers to board the train so it may leave this station twenty or more seconds late. At the next station the number of passengers has increased because of the added delay, which upped the lateness. This condition pyramids from station to station, generally resulting in the delayed train arriving at the terminal several minutes behind schedule.

At such times, the train dispatcher is faced with the job of making plans for maintaining schedules and furnishing all possible service to the public. Yet little can be done to provide service on the section of line between the delayed train and its terminal point, other than the trains that are operating in that section. In the opposite direction he can provide reduced service by "backing up trains", that is increase the headways of trains leaving the terminal by starting them later than scheduled time. After this possibility has been exhausted, he may send out an additional train—if he has the cars—known as a relay. This is manned by qualified operators to take the place of the delayed train. When trains meet, crews are exchanged putting the regular train and crew approximately on scheduled time, while the relay crew operated the delayed train to its terminal.

If the delays occur near the starting point, the dispatcher may find it possible to back up some of the leading trains at a point near the center of the route. If the interruption is very long and extra crews and trains are not available, it may be necessary to cut back one or more trains at the emergency crossovers spaced along the line about two miles apart. The towers at such crossovers are not usually manned. Before any cutting back can be done, the dispatcher must provide someone to operate the interlocking machine and transmit orders to the train crews.

In case of a delay, the train dispatcher's principal job is to manipulate his trains to establish normal headways as quickly as possible. It may be hours before he gets all trains into their regular place on the schedule. The main duty of a trainman is to keep the train moving safely, but above all else, keep it moving. To do this he must know the car equipment thoroughly and further, must know how to diagnose and overcome equipment trouble well enough to get the train to the terminal.

MISS SUBWAY'S dream: empty platforms and waiting train. To get shot, photographer went to end of line between ten and four

ROADWAY crane clamps its teeth on rail replacement for Broad Street line

STRUCTURES, signals and rail repair total heavy bill annually. Above, men work on el bridge over Schuylkill River

To do this he must take extended courses of instruction and must satisfactorily pass examinations, orally and by demonstration, on his knowledge of the equipment and trouble shooting.

So far as could be determined at this writing, Philadelphia has the first and only women motoring on high-speed city lines. In Broad Street subway, Miss Regina Jewell passed her examinations and operated a subway train on her own, November 1, 1943, on the Market-Frankford subway-elevated lines. Miss Dorothy Williams was the first girl to operate a train in the next year. We now have eight women operators. They are doing a fine job and have shown themselves as adept as the men in correcting equipment failures.

THE schedule-maker, too, has his problems. In Philadelphia, the high-speed lines are operated as part of the city-wide transportation system. At times of close headway, it is not necessary to take into consideration the schedules of routes other than the one on which he may be working at the time. However, when scheduling train movements for owl service, he must arrange meets between high-speed and surface lines to the best advantage of the public.

In the early morning hours high speed "owl" service is operated on headways of sixteen and twenty minutes, and as far as possible the service must be timed to make the maximum number of connections with the most heavily used intersecting surface routes. Since the service requirements and therefore the headways of the various routes, may differ, the timetable man has a difficult job trying to accomodate the majority by arranging meets at the intersecting points of high-speed, trolley and bus routes, without supplying unnecessary—and therefore unprofitable service—on individual routes.

Yard forces have a very important function in high-speed operation. They make up trains and set out the equipment before they go on the line, handle trains out of and into the yards and storage tracks, cut and couple cars on line trains as traffic requirements dictate, as well as dig out cars for shopping, inspection and cleaning. Yardmasters must keep track of the cars, moving and in storage. At all times, a close watch must be kept on car allotments, to have them available in their proper place according to schedule requirements.

This last is both a difficult and important job when all the equipment is not alike, as is the case on the Market-Frankford

line. Two types of cars are used, which cannot be trained together on account of a different type of motor control. If not careful, a yardmaster may find an excess of one type on hand, when he requires cars of the other to build up incoming trains for increased traffic. Having cars entering the yard at the right time to feed them to the inspection house on schedule is another headache.

SIGNALLING plays a very important role in subway-elevated operation. Signals are required for safe spacing of trains and for guiding them through interlocking territory. They are also necessary for speed control on steep grades and sharp curves.

On the Camden line, the approaches to the Delaware River Bridge are on five percent grades, and speed on downgrade is limited to thirty-five miles per hour. Speed control signals are spaced and timed so that the motorman who operates at the prescribed speed will have a green indication on each signal, as he passes it. But if he exceeds the speed limit, he will be tripped and stopped in short order.

Due to relative short spacing of signals, the maintenance sections are comparatively short—two to three mile sections as against sections many miles long on steam roads. This condition means a large staff of signal

SIGNAL is clear for Market Street train at 24th St.

YARDMAN to towerman via loudspeaker at Fern Rock Yard, terminal of Broad Street subway

BUILDER'S PHOTO of Number 1001, outshopped in 1936 for Delaware River Joint Commission, now PTC's Camden route

maintainers, considered from a steam railroader's viewpoint. Maintenance of rolling stock is another vital factor in high-speed operation. Inspection and overhauling of cars is scheduled on a mileage basis. When a car has been operated a pre-determined number of miles it goes in for inspection; after greater service, it is ordered to the shops.

Power for high-speed lines is tapped from substations for the combined rail and trackless trolley lines of the system. On the Market Street section, the substations supply power for both types; two of the Frankford Elevated substations are adjacent to, and interconnected with, surface line substations; the remaining Frankford, Broad and Camden substa-

DEAD END. Fern Rock Yard provides storage space for Broad Street cars not on the road but designated by yard force for next day's lineup

tions furnish power for high-speed only. A.C. primary power is supplied by Philadelphia Electric Company at 13,200 volts to the substations, where rotary rectifiers convert it to 650 volts D.C. for the contact rails and trolleys. The substations also furnish A.C. power at various voltages to high-speed lines for signals, lighting and other equipment. By means of tie cables between substations and equalizing circuit breakers between sections of the contact rail, power service can generally be rapidly restored in case of trouble in a substation or on a feeder cable.

Trying to outguess the public, collectively and individually, keeps one busy and alert; sometimes we rate a hundred percent miss. But its all part of the fascinating problem of moving millions a year on split-minute schedules. When we guess right, we have done a good job. But when we guess wrong our public relations department—the "kick" center of the system—is prompt to pass along the complaints. The public has its own ideas of how high-speed operation should meet their demands.

* * *

Car Barn Comments

Steve Maguire

RAILFAN publications continue to increase in value and number. Here are several that have lately come across our desk:

Transfer Collector, which suspended publication during the war, is back again. In addition to giving information on transfers issued throughout the U. S. and Canada, it contains up-to-the-minute news of electric railways. It is printed by the hectograph method and is a monthly. Subscriptions cost $1.00 per year. Write Charles S. Jones, 2920 W. Master St., Philadelphia 21, Pa. for further details.

Harry D. Lentz, Lebanon, Pa., author of *Trolley Roads, Mauch Chunk Switchback RR,* and other rail histories, has just issued a new story, *Trolley Line in the Williams Valley.* It is a 51-page illustrated history of the Lykens & Williams Valley trolley line, containing occasional references to other electric and steam roads in south central Pennsylvania. Steam fans may be interested in the very rare photograph of Williams Valley RR's *A. F. Baker,* first and only locomotive on that steam road back in 1892. Copies may be had from the author at $1 each.

History of the *North Hudson County Ry.,* a predecessor of several Public Service C. T. lines, is contained in the latest issue of *The Marker,* publication of North Jersey Chapter of NRHS. The twelve-page, illustrated story was written by two members of this group, Edward Francis and George Walrath. Copies may be obtained at twenty-five cents each, from R. S. Wendeling, 114 Oakley St., Roselle, N. J.

One of the few high-speed interurbans of New England, the *Portland Lewiston Interurban RR* is featured in issue No. 14 of *Electric Railroads,* special publication of the Electric Railroader's Assn. The consist is four illustrated, large-sized pages. Copies of this issue are sent free to members; others may obtain them at thirty cents each from ERA, 51 West 35th St., New York 1, N. Y.

Bamberger Railroad, one of the most progressive interurbans of the West, is given a very comprehensive treatment in Special Bulletin No. 4 of *Interurbans,* a railfan monthly which has become a close equivalent to a trade paper in the field of interurbans. With 24 pages devoted to the complete story of this Utah interurban line, it is hard to imagine a more complete coverage than is presented in this Bulletin. For copies write Ira Swett, 1414 So. Westmoreland, Los Angeles 6, Calif. We have not been advised as to the price, but similar issues in the past have cost one dollar.

AROOSTOOK VALLEY, last interurban in Maine, saw the end of its electric operation on August 7th, when old, wooden combine Number 70 rolled to a stop at the Presque Isle terminal at five o'clock. Sole survivor of four passenger cars that ran on the road during its thirty-seven years of electric operation, the maroon-colored trolley was the only remaining piece of electric equipment on the line at the end. Two cars were scrapped years ago; Number 71—the third—caught fire and burned in 1945. Since freight service switched to Diesel this year, only Number 70 was left to make use of the overhead.

Built in 1907 for handling logs and lumber upstream for Presque Isle, the road is now operated by Diesels for freight only. Bangor & Aroostook buses have taken over the passenger service.

* * *

SURVIVING Maine electric line—the two-mile York Utilities Ry.—may shortly be abandoned, if the Boston & Maine vacates their Portland-Rochester branch, reports Peter Ascher, Chamberlain, Me. This line feeds the York Utilities with occasional freight; and abandonment, which may come by the end of 1946, will make operation of the two passenger cars alone unprofitable.

Ascher also tells us that Springfield Terminal has been granted permission to abandon their passenger service between the B&M station at Charlestown, N.H., and Springfield, Vt. They have already cut two runs off the daily schedule, and our correspondent believes that the B&M, who control the line, may be planning on Diesel switchers for electric freight now in operation.

* * *

Louisville Railways had no sooner started to unload their new PCC cars for the 4th St. route, than the management arranged a plan whereby the cars would be traded to Cleveland, Ohio, for gas buses.

Duane Bearse, 19645 Telbir Ave., Rocky River, 16, Ohio, advises us that, although the deal had been arranged, the Louisville City Council refused to permit it without further investigation. After the Council as a body took a trip to Cincinnati, and examined the PCC car operation in that city, they came back "sold" on the PCC's, and refused to permit Louisville Rys. to trade its cars to Cleveland for buses. So it seems that Louisville can be sure of retaining the streamlined cars on their heavily-traveled line to the races for many years to come.

* * *

Seashore Electric Railway, a railfan's road consisting of a short stretch of track near Kennebunkport, Me., now owns eight pieces of equipment—a good number for a line with hardly one hundred feet of track laid to date.

This road was started just before the war, by the New England Elec. Ry. Historical Soc., with offices at 10 Spring Hill Ave., Somerville 43, Mass. It was, and still is, the intention of this group to obtain representative pieces of rolling stock and eventually lay sufficient track upon which to operate them.

With the end of the war, the group started up again. More rolling stock has been added, and they are now trying to obtain the Aroostook Valley's last passenger car, number 70, a heavy, wooden interurban.

Here are the cars now located on the Seashore Property: 31, a double-truck open, formerly Biddeford & Saco RR.; 38, a double-truck suburban car, formerly Manchester St. Ry.; 60, a short, closed car formerly from Portland RR. in Maine; 82, a single-truck Birney recently acquired from York Util., at Sanford, Me.; 615, a single-truck Birney, formerly Biddeford & Saco RR.; S-71 a single-truck line car, formerly Eastern Mass. St. Ry.; T-116 a single-truck flatcar, formerly Worcester, Mass.; 038 a single-truck work car, formerly Worcester, Mass.

Seashore Electric is engaged in a drive to obtain more members, and more funds for repairs and maintenance of the above cars. For details write to the Society's Somerville address.

LEGEND of World War II, Kilroy will soon seem no more of a myth than New York's trolleys. Wartime shortages forestalled ripping up of tracks until November 10th, when Diesel motors took over 59th Street

Photo above and right by H. M. Tischler, 310 W. 106th, New York City 25

COLUMBUS CIRCLE *right* circuited by rails and trolleys several days before switch. Monument was interchange spot for crosstown, uptown and downtown electrics

Photo from New York Daily News

IN MOURNING. Passing of cream and crimson cars was formally marked by New York's Acting Mayor Impellitteri, who placed wreath on horsecar

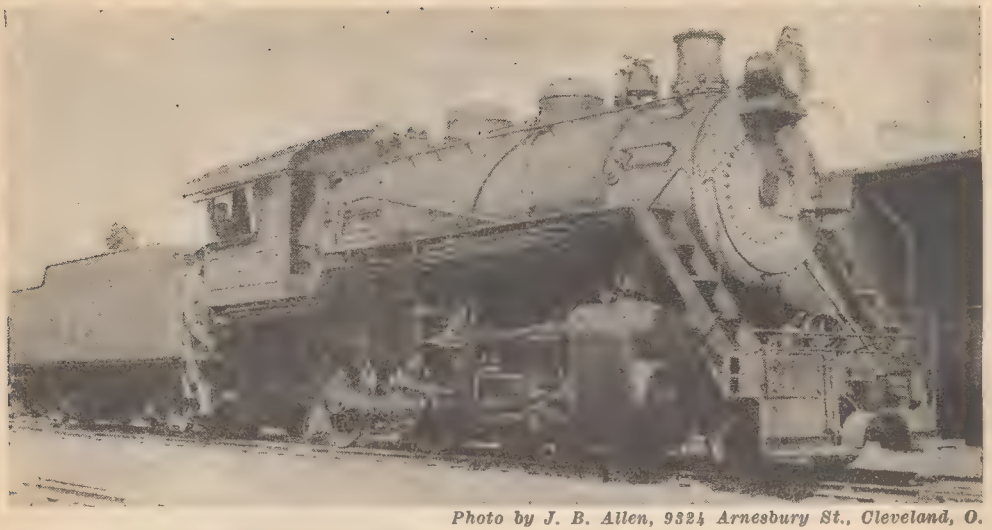


Photo by J. B. Allen, 9324 Arnesbury St., Cleveland, O.

COTTON BELT Moguls work the E. St. Louis Yards

Photo by C. W. Witbeck

ARCH separating footboard segments distinguishes engines used in switching

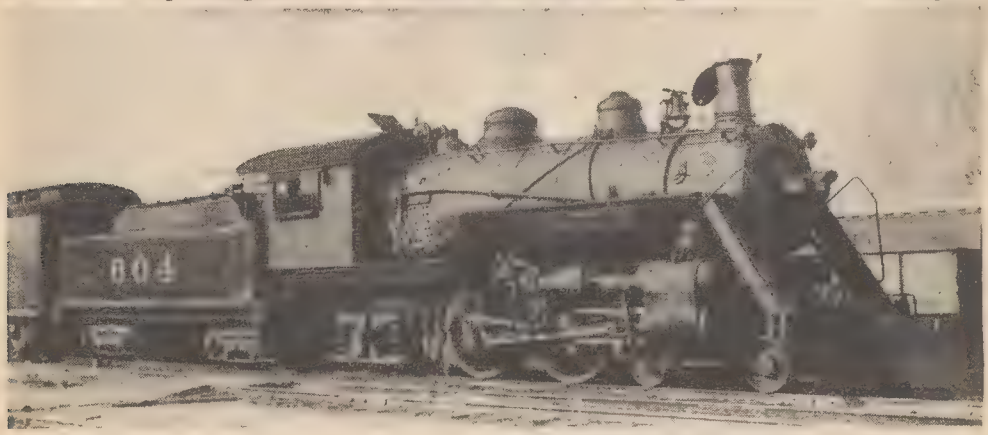


Photo by Robert M. Hanft, Brainerd, Minn.

LOW-DRIVERED Atlantics handle local passenger service out of Shreveport, La.

Locomotives of the St. Louis Southwestern

THREE-QUARTERS of a century old, the Cotton Belt Route (St. Louis Southwestern) was incorporated as the Tyler Tap R.R. Co. in December, 1871. Six years later service was inaugurated on its narrow-gage line between Tyler and Big Sandy, Texas, using two diminutive locomotives, *Punch* and *Judy*. Meanwhile the Little River & Arkansas Valley, destined to become the northern section of the St. Louis Southwestern, had its start in 1877.

In May, 1879, the Tyler Tap was renamed the Texas & St. Louis and merged with an affiliate, the Texas & St. Louis Ry. Co. or Ark. which had constructed a line from Birds Point to Malden, Mo. Further extension of trackage from Pine Bluff, Ark. to Gatesville, Texas, and standard gaging of the entire system in 1887 gave the carrier its present physical aspect. Reorganized as the St. Louis, Arkansas & Texas Ry. in 1886, it assumed its present title five years afterward in Jan., 1891. It operates 1617 miles of line.

Steam Locomotives

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
		0-8-0 (Switcher) Type					
G2	500	23½ x 28	55	190	213,500	45,405	Baldwin, 1906
G2	504	23½ x 28	55	190	213,500	45,405	Baldwin, 1906
G2	524	23½ x 30	55	190	213,500	48,648	Baldwin, 1910
		2-6-0 (Mogul) Type					
D3	331, 333, 334, *336, *338–340	19 x 26	51	200	159,000	31,826	Baldwin, 1906
G1	427	23½ x 28	55	175	206,000	41,820	Baldwin, 1912
E4	450–453, 455,	20 x 28	57	200	169,500	33,403	Baldwin, 1909
E4	456, 459						
		2-8-0 (Consolidation) Type					
G1	501–503, 507	23½ x 28	55	175	201,000	41,820	Baldwin, 1906
G2	513, 515, 518	23½ x 30	55	180	206,000	46,088	Baldwin, 1909, 1910
G2	520, 523, 525, 527, 529	23½ x 30	55	180	210,000	46,088	Baldwin, 1909, 1910
G2	514, 519	22 x 30	55	200	204,000	44,880	Baldwin, 1909
G2	545, 546, 548	22 x 30	57	200	227,560	43,305	Alco, 1909–1910
K1	550–577	25 x 30	57	185	239,000	51,726	Baldwin, 1912–1913
K1	578–589,	25 x 30	61	190	243,000	49,640	Baldwin, 1916
K1	750–770	25 x 30	61	190	243,000	49,640	Baldwin, 1920
K1	771–785	25 x 30	61	200	243,775	52,254	Baldwin, 1923
		4-6-0 (Ten-Wheeler) Type					
F1	250, 251, 253, 254	22 x 28	62	185	198,000	34,372	Baldwin, 1910
G0	650–667†	22 x 28	69	200	221,000–222,000	33,389	Baldwin, 1913
		4-4-2 (Atlantic) Type					
E1	600–605	21 x 26	70	185	195,000	25,758	Baldwin, 1909
		4-8-2 (Mountain) Type					
M1	680–686	26½ x 28	74	220	365,000	49,689	Alco, 1920
		4-8-4 (Northern) Type					
L1	800–809	26 x 30	70	250	419,800	61,564	Baldwin, 1930
L1	810–814	26 x 30	70	250	438,500	61,564	StL&SW Ry., 1937
L1	815–819	26 x 30	70	250	438,500	61,564	StL&SW Ry., 1942

**Nos. 336, 338, 339 and 340 were built by Baldwin in 1909.* *†Engines in 660 series were built in 1916.*

Photo by R. J. Foster, Box 375, E. St. Louis, Ill.

HIGHEST-WHEELED passenger engines on the system are seven Alco girls of the M-1 Class

4-8-0 (Twelve-Wheeler) Type

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
LO	675–679	26 x 28	73	200	313,000	44,079	Alco, 1924

Diesel Locomotives

Class	Numbers	Horsepower	Drivers	Engine Weight	Tractive Effort	Builder and Date
			(Switcher) Type			
Z 10B-B	1000–1002	1,000	40	238,580	71,300	Baldwin, 1942
Z 10B-B	1003–1005	1,000	40	240,580	71,530	Baldwin, 1943
Z 10B-B	1006–1022	1,000	40	241,890	73,190	Baldwin, 1944
			4 A + B Units Type			
Z-54	900, 905, 910	5,400	40	917,900	224,140	GM, 1944
	915, 920			928,620	226,820	GM, 1945

HOMEMADE and handsome, St. Louis Southwestern has built twenty of these modern 4-8-4s in its own shops

According to the Rule

The Rulebook Said Nothing About Meets With Mexican Firing Squads—Still Jose Found His Answer There

IN 1912 I was B. & B. engineer for the Nor-Oeste de Mexico. That was the year that Pascual Orozco, Antonio Rojas, Ynez Salazar, et al, were campaigning for president on the demolition ticket. To all appearances, the decision hinged on which candidate first succeeded in removing all trace of the Northwestern. Between them they were doing a beautiful job. Every few days a bunch of them would pay a visit to our streak of rust, and when they left all we would have for twenty kilometers either way was the charter.

Along in July, I returned to headquarters at Madera. I had spent three weeks camping out with the work train, cleaning up after a rally of arson specialists on the Chihuahua division. I was just getting the top layer soaked loose when someone pounded on the bathroom door. In answer to my, "Who's there," a voice replied in Spanish:

"Senor Gilmartin wants you."

"All right," I called back. "Tell him that I will be over as soon as I get rid of enough Northwestern right-of-way that I can tell for sure if that Chinaman has stole my other suit of underwear."

Gilmartin was super on the Juarez division. A big fighting Irishman and one of the men burned to death when Mexican revolutionists wrecked and burned a passenger train in La Cumbre tunnel a year and a half later.

"I suppose you've heard about what

NO PILOT cleared the track better than the Pancho quadruplets

By A. C. PYNE

happened up north last week," was Gilmartin's greeting when I entered his office an hour later.

"There's been rumors around," I replied with a grin. General Salazar had caught a train crew and sent them out to count the ties between San Pedro Candelario and Nueva Casas Grandes—a distance of fifty kilometers—in their birthday uniforms.

"Salazar's gang of cutthroats moved in up there last week. They've burned every bridge between Corralitos and Medinas. They captured the first three trains we have had over the line in a month. Burned the cars and ran the engines into burned bridges," he told me.

"Salazar's a great boy," I replied. I met him a few years ago up in New Mexico. That was before he got ambitious."

"Well," the super continued, "I'm going to give you a chance to renew the acquaintance. I want you to go up there with the work train and see if you can get those bridges back. Build shoo-flys around every one possible. Throw up cribs of cross ties and lay stringers across the others. Anything we can get a train over. We probably won't get more than two or three anyway." (We didn't get any.) "I will send an engine and caboose out of here tomorrow morning. You will pick up the work train in Pearson."

The north end of the Juarez Division had originally been the old Rio Grande, Sierra Madre al Pacifico. It was built back in the 1890's by Mormon colonists in Mexico and ran southwest out of Juarez across the Chihuahua desert to Nuevas Casas Grandes, two hundred and twenty kilometers. The structures were all timber. After baking for fifteen years in the desert sun, the yellow pine would go up like a V-2 rocket if you got close to it with a lighted match. Salazar's bravos loved to see things burn.

We left Madera about nine the next morning. Kid Abrams was on the right hand side of the 64, and Dad Turner was the brains on the back end. Just as we were ready to pull out, four Federal officers showed up for a ride with us. They belonged to a regiment that had been in camp at Aguaje, a helper station on the west side of the mountains.

I climbed up and made myself comfortable in the cupola. As soon as we cleared the Madera yard, Jose, our rear brakeman, joined me. He fished out his book of rules and asked me to read it.

You wouldn't find two brakemen in a solid carload that could tell you a single letter on the side of a box car, but they all felt half naked without a book of rules in pocket. At every opportunity they'd have someone read to them. In this manner many of them had memorized the entire book, and could cite verse and chapter, though their interpretation would leave the rules committee in a daze.

When we reached the top of the mountain at La Cumbre, the operator told us that a troop of red-flaggers had moved into Aguaje that morning and that there was a battle in progress. From our point of view, that wasn't as bad as it might sound. As long as they were shooting at each other they wouldn't have time to tear up any track. We got a clearance to Aguaje and rolled on down the mountain. We left our passengers at La Cumbre, inquiring about short-cuts back to Madera.

A short distance below Caballo at the foot of the mountain, and four or five kilometers above Aguaje we saw the Federal troops occupying a ridge across the river from the track, but the shooting seemed to be over. Farther down the river, we saw five or six Federal soldiers hanging to trees, but no other sign of the rebel troops.

We were only a short distance from the Aguaje yard when Kid jerked a couple of short blasts from the whistle. Looking out the window, I saw a red flag sticking up at the end of the ties. I thought nothing of that for I knew there ought to be a section gang working along there. As for the color—well, when a Mexican section foreman put out a flag the color of it didn't mean anything. A flag was a flag.

There was an eating house in Aguaje, and I was just getting ready to climb down

when a neat little round hole appeared in the window inches in front of me.

I had dived for cover so often in the previous two years that my action was purely automatic. The Kid must have laid her over the big hole while I was in mid air, for I landed with a crash against the front of the crummy with Dad and Jose on top of me. Before we had time to untangle ourselves, red-flag rebels were pouring in at both doors. The uproar outside sounded like the call boys had arrived from both branches of the hereafter.

Dad and I were prodded off the caboose with rifles in our backs. Sandal-footed peons were pouring out of the brush on both sides of the track, yelling and shooting. They hustled us down the track, a bravo hanging to each arm and two or three rifles jabbing us in the back. Kid had been hauled off the engine and was being prodded along just ahead of us.

In a cut some fifty yards from the engine, a little coffee-colored *pelado* was doing a Kalispell hop in the middle of the track, waving a big, long cheese slicer and screeching like a third alarm. About a dozen others were running back and forth in the cut, everyone yelling for somebody to do something different.

None of us were greatly excited by all of this display. We had been through similar situations before. Up to that time no Americans had been seriously mistreated. We anticipated nothing worse than a bawling-out for being in Mexico, plus the certain theft of anything we had on us that they thought they coud use.

When we reached the cut we were shoved up against one bank. The little hombre with the long pig sticker was still ranting. All I could make out was something about gringoes and certain domestic animals of the lower order.

"What's the matter with that overgrown tom cat, anyway?" I asked the Kid.

"It's too much for me," he replied. "It has something to do with me running by that damned flag back there, though."

I called to one of the red-flaggers who seemed to be some kind of an officer. At the same time I stepped forward, intending to explain how it happened that we disregarded the flag, but a little short greaser rammed the muzzle of a long Mauser rifle into my belt buckle.

About that time I began to suspect that the intentions of this bunch weren't strictly honorable. Unless I was mistaken they were lining up a firing squad.

"Do you suppose that little devil really means to shoot us?" the Kid asked.

"Damned if it don't look like it."

"Why, the son-of-a-gun is crazy," yelled Dad Turner. He started toward the officer, but a soldier struck him in the chest with the butt of a rifle and knocked him back against the bank. Kid and I both started yelling, trying to attract the attention of one of the officers, but no one paid any attention to us. They were all milling around the excited little runt whom they called *"Coronel."*

The Colonel had settled down to raving about the atrocities which had been perpetrated on his compatriots by the gringoes from up north. He would teach them that they couldn't come down to his beloved *patria* and trample on patriots.

"Kill them all!" he shouted.

It would have been a great speech if we had been in a position to enjoy gems of oratory. But right then I was trying to think up a good story to tell St. Peter. Then I heard someone calling in Spanish:

"Wait! Wait! See the rule to run the train."

It was Jose, our rear brakeman. He shouldered his way up to the pint-sized colonel with a book of rules open in his hand.

"See," he said. "Here is the rule in the book for run the train. It says, the flag in the middle of the track, the train stops. The flag to the side of the track, toots twice the whistle. Look out. Proceeds forward."

Right there I could have pinned a medal on that saddle-colored peon as big as the front number plate on the *Sunset Limited.*

The Colonel grabbed the book and glared at it savagely. Just then one of the officers moved over and I had a good view

of the book in the Colonel's hand; my hopes subsided like a stale bromo seltzer. Kid Abrams grabbed my arm and gasped:

"For Christ's sake, do you see that?" His eyes were sticking out far enough to hang a lantern on. Dad Turner was repeating a single cuss-word over and over like a litany. I nodded and slumped back.

Then I straightened up and I suppose my eyes popped out too. Our little jumping jack had started turning the pages slowly, glancing over each one. Presently he handed the book to one of the other officers, and stood jabbing the point of his sword at a crack in a cross-tie. His head was bowed as though in deep thought. It was plain that he was wrestling with a weighty issue. The second officer was studying the page with judicial gravity.

"Well, by God," exclaimed the Kid. "I've seen everything now." The Colonel said something in a low tone to the man with the book. He nodded his head in agreement and closed the book which he handed back to his superior who passed it on to Jose. Then he waved his sword off in the general direction of the side-rail universe and snapped: *" 'Sta bueno. Vayase."*

We didn't wait for him to repeat that. None of us exactly ran, but we broke some other records getting back to the train. Several minutes later we were slowing down for the station at Aguaje. Dad hopped off and trotted into the telegraph office. A minute later he was back saying he couldn't find the operator.

"Let him go," replied the Kid. "I've got all the orders I need to move on."

Five or six kilometers down the line I heard two short blasts from up ahead. I was riding the back platform where I would be in position to join the birds without any lost motion in case we run into another red flag. Craning my neck around the corner of the crummy I saw a Mexican, dressed a little better than the average peon, coming up the track to meet

HARDLY the safest place to sit out a revolution, Northwestern boxcars were camping grounds for Mexican families prepared for quick exit should their candidate lose the election

us at a clip that was leaving a shower of ballast in the air behind him. He scrambled aboard before the train had lost motion, screaming: "go! go! go!"

We saw that it as Antonio, the operator at Aguaje. Dad gave Kid a highball while Jose and I were trying to get a dipper of water down Tony in an effort to cool him off a bit.

Tony sputtered like a wet fuse for ten minutes, then he demanded to know where the *reveltosos* were. When we told him that they were still at Aguaje he got his boiler pressure down enough to unfold his tale of betrayed confidence, which explained why the Colonel was foaming so bad up at Aguaje.

It was all the result of two great plans running through a derail. Tony was a total immersion *Maderista*. When the battle started to go against the *Federales*, his loyal peon heart yearned to perform heroic deeds for his beloved *presidente*. But he was just a lowly telegraph operator, and he didn't like to be shot at. Then some gossip passed the word over the wire that we were carrying some federal officers, and Tony picked it up.

Instantly Tony's brain clicked with something which he mistook for an idea. Suppose he multiplied that four by a hundred and passed the information to the red-flaggers? They would expect to be outnumbered as soon as the train arrived. Consequently, they would try to be somewhere else first. It was that simple.

He had no trouble finding an officer who was still prowling around to see if his fellow patriots had overlooked anything worth stealing. Tony whispered his information in the approved manner of furtive conspiracy and was elated to see the would-be liberator of peons go galloping off to spread the alarm.

But the rebel chieftain didn't conform to the pattern Tony had laid out for him. It was his day to have ideas, too. He pulled his men out of the battle, which wasn't paying off any too well anyway, and pulled them back near Aguaje where he ambushed them in the brush on each side of the track. Then he planted his colors by the track where he calculated they would stop the train in position for his hombres to work on it to best advantage. To avoid jeopardizing leaders whom his country couldn't afford to lose, he and his staff retired down the track where they would be in immediate reach of their horses in case his bravos failed.

When the Kid didn't stop for the flag, the Colonel jumped to the conclusion that the federal troops meant to get behind him. In which case he had plenty to worry about and not much time to do it in. With those Federal soldiers hanging in plain sight up the river, his horoscope was easy to read.

When Tony saw the red-flaggers stepping out of role, he began to be troubled with misgivings about his own future. He foresaw the time when they were going to start wondering about the information he had been so free with. And he had a hunch that when that time came he'd better have a lot of cross-ties between himself and Aguaje.

Of course Jose was the hero of the occasion, and he ate it up. He strutted like a five star admiral. Every time he retold the part he played in saving our lives—which was every time he could get any one to listen—he added an inch and a half to his stature.

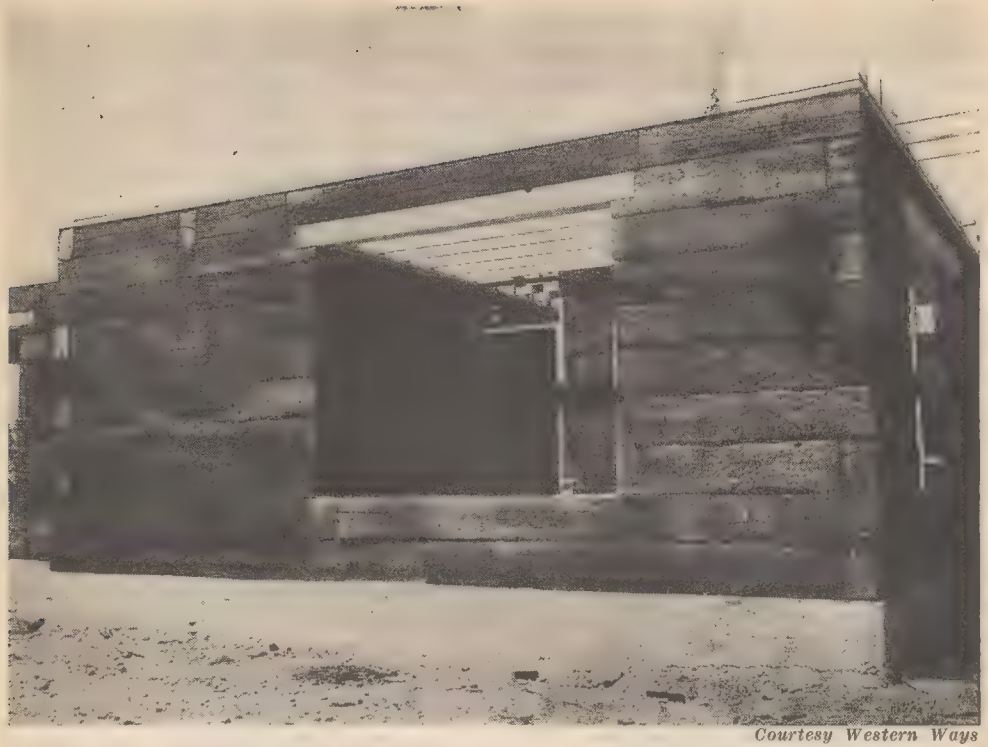
A few days after the affair at Aguaje I was sitting in the shade of the caboose making up a list of material to send in to Pearson by the swing train when Jose strolled up. He started to climb onto the caboose, but stopped with his foot on the lower step, one hand grasping the handrail, looking down at me with his teeth shining like a toothpaste ad, he said:

"How you like dose rule I read for dese red-flagger? She's hokay. *Verdad?*"

"You're my idea of a genius, Jose," I assured him solemnly. "I don't suppose there is another man living who would have had the presence of mind to hold the book of rules upside-down."

At this evident praise, his face lit up like the sun coming from behind a cloud.

"Sure Mike," he said and swung aboard.



Courtesy Western Ways

THIS is the house that ties built. Total cost when completed, $6,000, may inspire other vets to emulate Ted and J. H. Freeman of Tucson, Ariz. Sleepers came from SP roadbed

On the Spot

Railfaring Men Sit With the Editorial Crew to Swap Experiences, Offer Suggestions and Settle Arguments

ABANDONMENT of so many railroad branch lines has been causing concern to a large section of the American public—railroad employes, shippers, civic leaders, railfans and others. Joseph E. Siegel, 7000 Bramble Ave., Cincinnati 27, O., deplores such abandonments and raises the question as to why, after the iron horse has gone, bus and truck lines have moved in and in numerous cases made a substantial profit over the same route.

Mr. Siegel finds food for serious thought in the case of the Southern Railway's discontinuance of its Statesville-Taylorsville branch, an 18-mile line in North Carolina mentioned in last month's *Railroad Magazine* ("The Barlow Plan"). Mr. Siegel comments on the success of the reorganized line, and says that the Alexandria Railroad can now boast a Diesel locomotive bought second-hand from a shipyard to replace the old steam hog. They call her *The Junebug*. The line's other rolling stock consists of a combination mail and express car and a handcar. Whatever freight cars they need are rented from the Southern at a daily cost of $1.15 each. Passengers are occasionally given a lift, free of charge, on the

train, but there are no coaches. Best of all, the venture is showing a profit.

Mr. Siegel comments: "The Southern, whose slogan is that it 'serves the South,' apparently was unwilling to put forth the extra effort needed to serve this community. Fortunately, the people refused to be licked. Their success casts a legitimate doubt upon the necessty for many such abandonments. What can be wrong with the trunk-line roads? It would be interesting to learn the reaction of brass hats, especially those of the Southern Railway, to this matter.

"If the railroads are making a mistake in their wholesale abandonments, it is a matter of concern to the entire American public. Are the roads using the wrong yardstick in figuring their costs?"

* * *

PREDICTION. The late Chauncey M. Depew, for years president of the New York Central, said in a speech before the Transportation Club of New York in 1905: "Within ten years the steam locomotive will be seen in the museum and we will be able to proceed over the rails by means of electricity at a rate of 75 miles an hour." Evidently Mr. Depew was a juicefan. He might have been surprised if he had lived to see the fine performance of steam locomotives, not only on the Central but all over the United States and Canada, more than four decades after making his rash prophecy.

* * *

RECOLLECTIONS of hobo life come from Clinton A. Sanders, now a home guard of 212 Kentucky Ave., Norfolk 2, Va.

"Wandering days are gone," he writes nostalgically. "Booming days are gone, days when I could hop a long drag to the West, working a day here, another there in some small town . . . down near a lazy stream under a kindly sun or mellow moon . . . fire burning low, a can of Java on the coals. . . The wind that drifts in your nostrils brings the smell of freshmown hay. . . Today in this jungle; tomorrow strolling down the main drag of some large city, ever wandering on. . . Tomorrow again the hot sands of a Western desert, ever on the alert for hostile yard dicks and dirty-necked brakies and cons. . .

"I could tell you a gang of yarns about the days when I rode the rods from coast to coast and from the Great Lakes down to Old Mexico. About the time I rode the tops of the *Panama Limited* on her maiden run. The bums I knew in the jungles of distant lands and states. I have not always been the mild little man with a wife here on Kentucky Avenue.

"When I hear the long low moan of those hogs as they tremble about a mile away and hesitate for the crossing, my pulse jumps a beat or two and I long for the life on the ribbons of steel. Cinders in my eyes, cinders in my shoes, a kindly old crossing watchman giving me a mug of Java, sleeping beside the rail, making mulligan in the jungles—hell, it is still in my blood."

After settling down, Mr. Sanders took to literary work, mostly compiling glossaries of lingo such as *Army Talk, Cant of the Crafts, Words of Trampdom,* etc. "I find," he writes, "that the tramps and 'bos use much of the same argot as the boys of the rusty rail. In fact, they have borrowed from most every division of American argot, cant and slang. I give them credit; they have coined some picturesque slang and have given many fine terms to the American language.

"A good tramp or hobo will go hungry before he will steal from the railroad. It is seldom that a professional hobo or tramp ever violates the rules of the rail. Wrecks have been prevented by these knights of the road, railroads have been saved many thousands of dollars, and many railroaders today owe their lives to quick-thinking hobos.

"The rails are robbed by rank ringtails (members of the lowest order of wanderers) and local short-haul tramps (local boys riding from division to division for the purpose of robbing boxcars or hauling liquor). No good 'bo or tramp will ever break a car seal. It is an unwritten law among the gentry. They will shy away

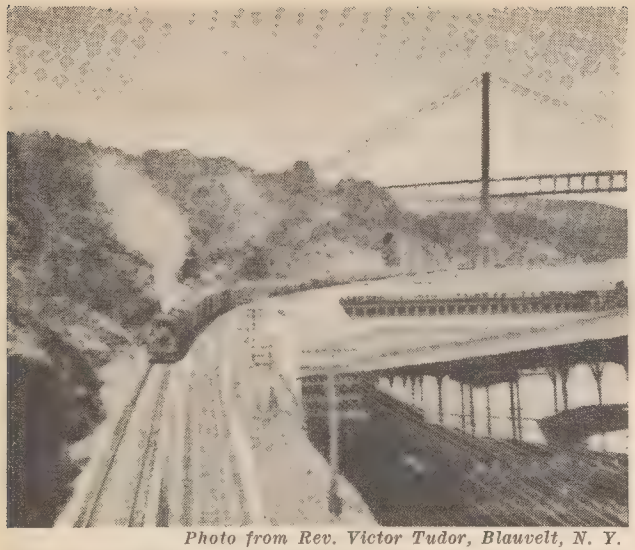


Photo from Rev. Victor Tudor, Blauvelt, N. Y.

WEST SHORE symbol freight warps to curve below Bear Mountain Bridge on its run down river to Weehawken

from a box-clipper as though he carried a deadly disease.

"Out along the Sunset Route about twenty years ago we were building a stew in a jungle when an old man, half frozen from a night hop on a redball, came among us. He was as ragged as a jaybird. We gave him food and hot Java and the old boy of the rambling road settled down. I was seated on the banks of the red Colorado washing my socks. The ancient gent sat beside me and we started banging our gums. One thing led to another, and he told me some words I'll never forget:

" 'Lad, when I pulled down from that hotball the other night and hit the jungle I was half frozen but I had to pull down and hit the grit. Y'see, lad, I did something I'd never done before. It got so damn cold riding that rattler that I had to go inside. We pulled for a drink at a spot below here and I broke a seal on a boxcar and crawled in. I settled down for at least a division hop; but lo and behold, just as sure as a ringtail is lousy as hell, I had broke into a carload of overcoats bound for the West Coast, so I had to unload. . .' If that is not an example of the honesty of man, then I myself am a ringtail, my dinky-dirt (shirt) is full of squirrels and I never built a stew along the old Denver & Rio Grande.

"This letter has taken me back to days when I was often cold and hungry; but as I finish writing, my understanding wife calls from the kitchen. She has brewed my cup of goodnight coffee to the right color and strength."

Our correspondent was born along Railroad Avenue in Okolona, Miss., a Mobile & Ohio Division town. His father, now retired, railroaded for four decades. His wife's father, a Seaboard engineer, was killed in an automobile wreck.

* * *

FORTY YEARS of being in a receivership is just about enough for the Pittsburgh, Shawmut & Northern, in the opinion of Federal Judge Guy K. Bard, who says:

"I am not allowing it to continue much longer. I insist that the reorganization get going or the road be sold, one way or the other."

Walter C. Merritt, 2105 Washington Ave., Altoona, Pa., writes: "The real story about this railroad has never appeared in the newspapers, though when the receivership crisis came to a head six or seven months ago part of it was brought to light and the new U. S. judge in Pittsburgh got curious and did a bit of spade work.

"The Shawmut was built primarily as a coal carrier before World War I. It was well built and had good equipment. After the war, the coal business slumped and so did the railroad. In a factional fight among the stockholders and bondholders the road was cut in two at St. Mary's, Pa., the northern segment being known as the Shawmut & Northern and the southern half as the Shawmut. Thus there were two roads, but for business reasons they

were operated as one because neither could exist long without the other. Passenger service did not last. When it became a losing item it was discontinued and the fine equipment was sold to the Richmond, Fredericksburg & Potomac.

"Recently there have been no regularly scheduled freight runs—just an occasional run when agents along the line accumulated loads enough to make up a train with all the pickups. As the story was told to me, when the road was cut up, a man named Abe Cohen of Kittaning, Pa., bought the southern segment for a song

COMBINED WEIGHT: 660 pounds
(See Page 127)

and found himself stocked with 26 engines and a flock of big hopper coal cars. He needed only two or three engines at most; what became of the rest I do not know. As for the coal cars, they were parked at any old place out in the woods wherever there was a switch. At Timblin, a mere hamlet, I saw hundreds of such cars that apparently hadn't been moved in years.

"The receivers were known as forgotten men. They drew salaries, but what they did for the railroad is something the court wants to find out. Last summer, when there was a strike at the Shawmut Mining Co., which is owned by the railroad but is now being operated on lease to a private firm, a woman social worker visited the camps where the strikers lived with their families.

"She declared that the sanitary conditions she found there were a shame and disgrace. The newspapers and Federal court took up the case, and Pittsburgh papers played up the story of the forgotten receivers. As an aftermath of all this, Judge Bard is insisting upon prompt action in terminating the receivership."

* * *

ENGLAND HEARD FROM. Isaac Kirkham, who signs himself a "delighted reader" of *Railroad Magazine,* is a leading steward in the Royal Navy, his address being Fort Southwick, near Fareham, Hants, England. In 1941 a bomb wrecked his home and wiped out his family.

He named his new home *Santa Fe* in memory of them, because of happy recollections centered around a trip over that railway while on a visit to U.S.A.

"Recently," he writes, "my home town had quite a ceremony over the naming of a London, Midland & Scottish locomotive. Our lord mayor named her *The City of Stoke-on-Trent.* The engine is a Pacific type, one of the road's largest classes. The citizens of Stoke-on-Trent who, like myself, are railfans are justly proud of her.

"In one issue of *Railroad Magazine* the London & North Eastern in my country was referred to as the 'Late & Never Early,' which brings to mind two other nicknames. The North Staffordshire was called the 'Neat, Sober & Respectable,' and the South Eastern & Chatham, the 'Slow, Easy & Comfortable.' I worked for both the North Staffordshire and the

London & North Western. Drivers (engineers) of the former were looked upon indulgently by I&NW drivers, but a North Staffordshire engineman once assured me solemnly over a pot of beer that the L&NW men knew nothing about handling motive power!

"The NS emblem was a knot resembling a pretzel, which is still the county emblem, both civic and military. Because of this the system was dubbed 'The Knotty.' The NS is now merged into the LMS group alongside the L&NW and the Midland. With its passing we lost a personal, individual aspect of railway life. Before ending this letter I wish to pay my respects to Conductor Sullivan of the Illinois Central whom I met on my coast-to-coast trip through America."

* * *

DIESELIZATION plans of the New York, Ontario & Western call for 21 switchers, 3 single-unit passenger engines and 2 freight locomotives of 3000 horsepower. These, added to the 5 engines already in use, will complete the road's Dieselization. The entire 31 will be Diesel-electric power. What effect the elimination of steam will have on employment at the NYO&W shops is a matter of speculation. When the Diesel-electrics were introduced, changes in all the car shops were made to accommodate them. All repairs, maintenance and installations on the new equipment will be made in the Middletown, New York sizeable shops.

This news, from the *Middletown Times Herald,* was submitted by D. Diver of Middletown, as a commentary on H. H. Gross's article, "Shawangunk Barrier," in our Sept. '46 issue.

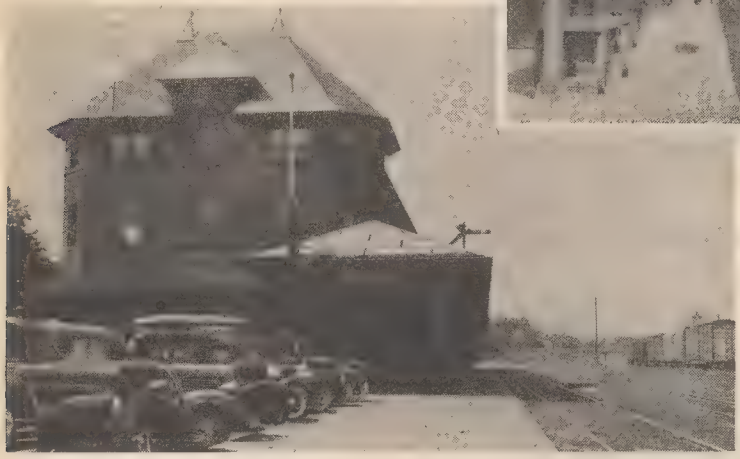
* * *

A HUGE TURTLE weighing 21½ pounds was picked up by a switching crew at work in a yard just outside of Memphis, Tenn., the other day while it was ambling across the tracks. The railroad men took the tortoise back to the city and presented it to the zoo. Charles S. Ryan, Venice, Calif., sent us the news.

Another animal anecode tells about the Baltimore & Ohio's *National Limited* stopping in Harper's Ferry, W. Va., one Sunday recently to pick up a returning GI and his dog. "This was the happy ending of a story of a man and his dog that began a few months ago in Maulberg, Germany," comments the *Baltimore Evening Sun,* which printed the following:

Pvt. Scott Cortez, 524 W. Kentucky Ave., Louisville, Ky., and Cognac, a mongrel dog, have been buddies since the GI found the puppy in Germany and adopted it. After four years' service, including 18 months overseas, Cortez was discharged

Photo from D. Diver



NYO&W station at Middletown, N. Y., with view of northbound summer special at upper right. Second and third floors house business offices of the line

from the Army at Fort Geo. G. Meade. A transportation officer handed him a ticket for home, saying the railroads wouldn't haul Cognac. So the soldier and dog began hitch-hiking to Louisville.

Now and then a motorist gave them a lift for part of the journey. The two were trudging westward on Route 40 when state police noticed them, fed both the soldier and the dog, and made arrangements with the B&O to stop its *National Limited* in Harper's Ferry and take the pair aboard. Cortez got first-class reservations; Cognac rode in the baggage car.

* * *

SHORTEST RAILROAD in Michigan but the one with the longest name is the Erie & Michigan Railway & Navigation Co., according to a *Grand Rapids Press* clipping received from Martin B. De Vries of that city. This road starts at the U. S. Gypsum Co. plant in Alabaster and extends north to Tawas City. Its own right-of-way, 4 miles long, ends at Alabaster Jct., where the little pike has 4.3 miles of trackage rights over the Detroit & Mackinac. A Gypsum Co. official, after making his first trip over the line, remarked:

"I've often wondered where this railroad got its name. Now I know. The first half is a railroad, but the last half must be the 'Navigation' part because it's rougher than the Great Lakes."

The midget line's rolling stock comprises one locomotive, the 8-spot; one waycar, three covered hopper cars and four gondolas. Gen. Supt. Allen Bigelow serves as conductor on the road's three-times-a-week schedule of freight runs between Tawas City and Alabaster, and looks nostalgically back to the days, long before tin lizzies came into general use, when the E&M owned a passenger car. Most of the freight is heavy gypsum rock, which is hard for wheezy old No. 8 to drag uphill. Sometimes Engr. Walter H. Moeller has to "double over the hump!"

Mr. Bigelow recalls that "plenty of times" E&M trains were snowbound, up to 14 hours at a stretch. "But even then," he adds with a laugh, "we were never so far away from home but what we could get off and walk back." He says he'll never forget the March day when a train left Alabaster with 20 cars and pulled into Tawas City with only one. A rail rolling over had derailed three cars, and 16 were left standing on the track until repairs could be made the next day. Like several other short lines, the E&M is nicknamed "The Punkin Vine" because it turns and twists like one.

Courtesy of NYO&W

TYPICAL of motor power slated for displacement by new Diesels is Old & Weary's Number 52

***TEXAS SPECIAL*; cargo: war-brides and babies, with Bill Goedeke, M-K-T's official greeter, ready to speed her departure at St. Louis Terminal**

REDCAPS. Origin of this term as applied to station porters—St. Louis calls 'em ushers—is attributed to George Henry Daniels and James Williams. Mr. Daniels was New York Central's general passenger agent and first advertising manager. He named the system's two greatest trains, the *Empire State Express* and the *20th Century Limited,* besides publicizing them and engine 999, and was responsible for the *Empire State Express* being pictured on a United States postage stamp in the Pan-American Exposition series. Mr. Williams was a resourceful porter employed in New York's Grand Central Station, predecessor of Grand Central Terminal.

The story goes that on Labor Day, 1890, Williams tied a strip of red flannel around his ordinary black porter's cap, aware that red was the most eye-catching of all colors, and solicited baggage-toting jobs in the station. His gay publicity stunt attracted so much attention that Williams made a lot of money that day, and repeated it thereafter. Other porters copied his idea. Soon it was observed by Mr. Daniels, who it is said, coined the word "redcap" and brought about the adoption of red headgear for all station porters on the system. In time, station porters on many roads were wearing similar headgear. Thus, what started out as one man's idiosyncrasy became standard practice.

Grand Central redcaps often get into the news. A few weeks ago one of them, Richard R. Holmes, found a jewel case containing gems valued at $15,000 which fell from a taxicab leaving the terminal. Holmes, who is a deacon in a Baptist church, has a strict sense of honesty. He chased after the cab but was unable to stop it. Then he turned the jewelry over to a terminal police lieutenant, who located the owner through an insurance company, and Holmes was given a substantial reward.

* * *

IT'S NEWS when an 81-mile railroad acquires regular Pullman service for the first time. So there was quite a cele-

bration October first when the Atlanta & Saint Andrews Bay Railway, known as "The Bay Line," inaugurated Pullman service over its entire route between Panama City, Fla., and Dothan, Ala. The line now operates a through Pullman car, the *Elmington,* in conjunction with the Central of Georgia, over both roads between Panama City and Atlanta, Ga.

* * *

NOBODY WANTED it any longer, so workman have just demolished the emergency railroad bridge over the Potomac River below Washington, D. C., reports Lt. Comdr. Lester C. Harlow, USN, 4215 S. 32nd Road, Arlington, Va.

This bridge extended from a Baltimore & Ohio spur track below the Naval Research Laboratories to a point on the Virginia side of the river on the Washington & Old Dominion right-of-way. It was hurriedly built in 1942 at a cost of $1,500,000. A single-track structure 3,412 feet long, not counting the approaches, it was built of steel trusses and untreated wooden trestles. Last spring it was declared surplus and placed on the open market, but because of the untreated wood no railroad company bid on it. The bridge had been erected as an emergency measure against possible air raids and enabled some trains to bypass crowded Washington yards.

* * *

WORLD'S FIRST train hostess, the former Miss Kathryn Sullivan of the Gulf, Mobile & Northern (now GM&O), who quit railroading in 1939 and became Mrs. Ross Pattullo, 711 Carew Tower, Cincinnati, O., tells us how she landed her precedent-breaking job.

"I had graduated from Southwestern Theological Seminary at Fort Worth, Tex., and from the College of the Ozarks with degrees of bachelor of music and bachelor of arts, having been an honor student in music," she recalls. "During the Easter holidays of 1935, while teaching in the music department at the College of the Ozarks, I took a trip to New Orleans by way of my home town, Jackson, Tenn.

"Jackson is famous as the town in which Casey Jones lies buried and in which Casey's widow and son live. Isaac B. Tigrett, president of the GM&O, also has been living there for many years. I motored to Jackson and there I took a GM&N sleeping car for the rest of the trip. There were only two sleeping-car passengers out of Jackson, another lady and myself.

"G. P. Brock, general manager of the railroad, was riding in his business car coupled behind our sleeper. About an hour out of Jackson a porter came to us and said Mr. Brock would be glad to have the two ladies join him in a game of bridge in his private car. Neither of us were enthusiastic about the invitation; I knew nothing about bridge, while the other lady was about to retire. We both declined with thanks.

"In those days the GM&N ran a sleeper only as far south as Jackson, Miss., arriving there at 5:30 a.m. I had to awake at that early hour and transfer to a day coach for the run to New Orleans. About three hours later a rather distinguished-looking gentleman took a seat beside me in the coach and asked, 'Are you the young lady who refused to play bridge with me last night?'

"That opened a two-hour conversation. It was an outstanding event in my life. I tried to interest Mr. Brock in my younger brother who would graduate that year from the College of the Ozarks. The members of my family wanted him to get a job with some good company. At length the talk drifted around to the new GM&N trains, *The Rebels,* which were to be ready in a few months as a contribution to the South's railroad history. Mr. Brock told me that President Tigrett wanted a young lady as a member of the train crew—he did not know in what capacity—and asked if I had any ideas as to what her duties should be.

"As a result of our talk, Mr. Brock asked me to get in touch with Mr. Tigrett, which I did. My school term ended May 15th, 1935. The next day I found myself seated in Mr. Tigrett's second-floor office

at Jackson. I did not make too good an impression on him. Later we had lots of fun about that interview. Mr. Tigrett tells me that he looked out of his office window—you can do that in a small town—saw me getting out of a taxi, and remarked to his secretary: 'Who is that country-looking girl? Surely not the one Glenn Brock is sending for me to pass on.' Really, as I look back on that day, I wonder how I managed to get the job."

Mrs. Pattullo, looking back more than eleven years, is inclined to err on the side of modesty. From other sources we learn that she was then, as she is now, a good-looking person with charm of manner and keen intelligence. While talking with Mr. Tigrett on that May day which changed her life, Kitty Sullivan was informed that the job called for a college graduate between the ages of 23 and 28 with a knowledge of handling people, neat appearance and pleasing personality. Being then 25, Kitty easily met the other requirements. The GM&N train hostesses were later obliged also to have a knowledge of first aid and typing.

"At first," Mrs. Pattullo says, "I knew so little about railroading that Mr. Tigrett required that for two months I do nothing but go over the entire line, riding every passenger train and stopping off at nearly every station so as to familiarize myself with the road and with the GM&N family. Those two months were most valuable to me, because I met so many GM&N employes and learned a lot about railroad operation.

"I feel deeply honored at having been selected as the world's first train hostess. It was sheer good luck. Almost any other girl could have handled that job and with just as much success. We had plenty of problems and no precedents to follow, but Mr. Tigrett helped us over the rough spots with his sympathetic understanding. I am grateful for the opportunity the job gave me to meet so many people. After resigning from the railroad in 1939, I became organist and choir director for a Presbyterian church here in Cincinnati, where I met my husband."

FOUR-MILE PIKE. T. L. McLean, an Illinois Central veteran with "whiskers" dating back to 1903, Box 132, Macon, Ga., sends us a clipping from *The Atlanta Constitution* telling about the short Sandersville Railroad in his home state.

The line extends between Sandersville and Tennille. Six times daily except Sunday, jovial Engr. Morris Hood drives his steam locomotive over that distance. He's been doing it for nearly 33 years. His fireman, Floyd Jackson, has been shoveling black diamonds into the firebox of the old girl for about 21 years. The town of Sandersville was built years before the Civil War. In fact, General Sherman's army burned it on their march to the sea.

Six days a week the Sandersville Special, as the road's freight train is called, hauls out 20 carloads of such products as lumber, white kaolin clay, cotton, peas, velvet beans, and wheat. It returns with an equal amount of farm equipment, building materials, and manufacturing supplies. Sandersville's six lumber mills and four clay processing plants are the mainstay of the railroad, which is owned by the elderly Ben Tarbutten. To help out in the housing shortage, Ben rented one of his two coaches—yes, the four-mile pike has two coaches—to a homeless family, besides renting a corner of his station house to a section foreman whose residence was destroyed by fire.

The line has two miles of spur tracks sprawling into the clay and lumber plants, and connects with the Central of Georgia and the Wrightsville & Tennille. Ben has 27 employes. His railroad, which has just passed its half-century mark, boasts two engines in addition to the coaches.

* * *

GRANDPA'S LUNCH PAIL stands high in the boyhood recollections of Ben Nelson, 170 E. 80th St., New York 21, N.Y., who writes:

"My grandfather was a Delaware & Hudson engineer with a freight run between Binghamton and Albany, N. Y., later handling a switch engine in Binghamton yards. I remember as a very small

boy being lifted up into the cab of his old Mother Hubbard engine and sitting on the fireman's side with trepidation and pride while my grandfather threw the big lever that started the monster.

"But better still I remember his lunch pail. I would go into my grandmother's cool dim pantry that always had a tantalizing smell of unnamed good things and spot a left-over piece of pie or cake. Always there seemed to be only one piece. Just as I'd reach for it there'd descend upon me a rustling of skirts, a flurry of detaining hands, and admonitions of: "No, no; that's for grandpa's pail!' There were cookies a-plenty in the stone crock, but it was those delectable, untouchable last pieces saved for the tin god that was 'grandpa's pail' that really broke my heart.

"I can remember it sitting there all shined up and waiting, a generous oblong tin container with rounded corners and a removable compartment on which stood a round tin cup like a turret. I sure hated that dinner pail."

* * *

A CROSSING WATCHMAN who meditates on the life he observes from his shanty by the Long Island tracks is Adam P. Goss, 2 Davidson Pl., East Rockaway, N.Y. Mr. Goss has been stationed at the Ocean Avenue crossing in his home town since 1927. He waxes philosophic as he tells of the rain and snow and hot sun that have beat about his hut, the friends he has made, and the numerous trains that have pulled in and out of East Rockaway.

"From my crossing shanty," he rhapsodizes, "I have seen children on their way to school; and years later, grown up and married, they have gone past my shack pushing baby carriages filled with children of their own. I have seen fellows and girls cross these tracks on their way to war, and some of them, but not all, have crossed the same rails and ties coming home again.

"From this shack I watch the trees burst into new leaves and the flowers bloom, and I feed the birds that nest in the branches. In summer when the days are warm and sultry I wave at trainloads of people heading for the beaches. Then comes fall, leaves drop silently over the right-of-way, until the trees are bare; the birds go away and there is no more singing. In winter there is sleet, and sometimes much snow that keeps me busy shoveling it away. I hope that when I die I can relieve St. Peter at the gates of Heaven."

* * *

BIGGEST engine crew we have ever heard of is that jolly pair of fat fellows on the Missouri Pacific's Central Kansas Division, Eng. Harold B. Elzea, who tips the scales at 340, and his slightly slimmer fireman. Robert L. Smith, who weighs only 320. There isn't much vacant space in the cab when these two boys are at work. We would like to hear from any engine crew that can beat this total record of 660 pounds. Also, how about claims made on behalf of the "smallest engine crew," or the tallest, shortest, oldest or youngest, or any other superlative in the railroad world? Come on, brothers, send in the dope. There's a gang of readers waiting for what you have to say.

* * *

HIGH-HAT TRAIN. Just a few decades ago many of our railroads operated trains that might be termed a bit "snooty," reports the *Boston & Maine Employees' Magazine;* and, though the name may not indicate it, *The Flying Fisherman,* operated by the B&M between Boston and Rockport, Mass., was just such a train. In fact, according to Condr. Herbert O. Erskine of Rockport, one of the last surviving employes who once served on *The Flying Fisherman,* that train was tops among exclusive "streaks of varnish" on Eastern roads. It catered to wealthy business and professional people residing along the Gloucester branch. To ride in it you had to pay $100 a year over and above the regular train fares.

The Flying Fisherman made one trip each way daily between Rockport and Boston, running local between Rockport and Montserrat and express the rest of the way. Among ordinary folks who

couldn't afford to pay the extra $100 fee, the train became known as "The Dude," a term which the regular patrons somewhat resented. It usually consisted of three coaches and a combination baggage car and smoker, hauled by a 600-type engine. The train was inaugurated before the turn of the century and continued until shortly after World War I, when the automobile took its place in the affections of rich commuters.

* * *

A CENTURY AGO, when Pullman cars were unknown, the *New York Daily Tribune* printed this item: "The Housatonic Railroad is requested by a correspondent either to run their trains through in the course of a day or stop them where passengers can find beds. We think this perfectly reasonable. He says he was among a number who could obtain no accommodations at New Milford (Conn.), where the train stopped for the night, several ladies having to lie on the floor without beds."

This tidbit was sent to us by Fred G. Nolty, c/o Littlejohn & Co., 120 Wall St., New York City 5, who recalls that he made his first trip over the old Housatonic (now NYNH&H) more than sixty years ago. At that time the station, telegraph office, general store and post office at Long Hill, Conn., first stop north of Bridgeport, were in a small frame office building about the size of a boxcar.

"I have a wealth of reminiscences of the Housatonic," he writes, "especially of the old Bridgeport yards, which I am going to put together some day. Incidentally, any reader who happens to visit the Sheffield, Mass., depot can see benches there marked 'H.R.R.,' relics of the old Housatonic which hasn't existed as an entity since 1885."

* * *

LAST STOP is the Reader's Choice Coupon *(page 143)*, which guides your editorial crew in selecting material for future issues of *Railroad Magazine*.

Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are written, all count the same. Results of balloting on the December issue show these titles listed in order of popularity:

1. Revitalizing Passenger Traffic, *Steffee*
2. Narrow-Gage Glory Days, *Lathrop*
3. True Tales of the Rails
4. Light of the Lantern
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6. A Greenhorn Wins His Spurs, *Harris*
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Most popular photos: 124, 32, 12-13, 20, and 125.

EIGHT-COUPLED Gulf, Colorado & Santa Fe freight job was among the first engines on road to be converted to Booth's oil burner

Railroad Magazine Index for 1946

ONCE again we offer a detailed, cross-reference index of fact material used in *Railroad Magazine*. As in the past the 1946 listing carries the item, followed by the month and page. Asterisks (*) indicate pictures. The list is issued mainly to serve readers who save their old copies and want to check back on elusive bits of information. We've also considered the need of railroaders, students, historians, journalists, researchers.

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BIG POWER for Montana's Bitter Roots, where Milwaukee lessens fire hazard with white coal

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1889 VIEW of Bangor & Aroostock roundhouse in Brownsville, Maine

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Statement of the ownership, management, circulation, etc., required by the Acts of Congress of August 24, 1912, and March 3, 1933, of Railroad Magazine, published monthly at Chicago, Illinois, for October 1, 1946. State of New York, county of New York, ss. Before me a Notary Public in and for the State and county aforesaid, personally appeared Harold S. Goldsmith, who having been duly sworn according to law, deposes and says that he is the Business Manager of Railroad Magazine, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form to wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Popular Publications, Inc., 205 East 42nd Street, New York 17, N. Y. Editor, Henry Steeger, 205 East 42nd Street, New York 17, N. Y. Managing Editor, none. Business Manager, Harold S. Goldsmith, 205 East 42nd Street, New York 17, N. Y. 2. That the owner is: Popular Publications, Inc., 205 East 42nd Street, New York 17, N. Y., Henry Steeger, 205 East 42nd Street, New York 17, N. Y., Harold S. Goldsmith, 205 East 42nd Street, New York 17, N. Y., Shirley M. Steeger, 205 East 42nd Street, New York 17, N. Y. 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: none. 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner, and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him. Harold S. Goldsmith, Business Manager. Sworn to and subscribed before me this 11th day of October 1946. Eva M. Walker, Notary Public, New York County Clerk's No. 40. Register's No. 363-W-8. (My commission expires March 30, 1948.) [Seal]—Form 3526—Ed. 1933.

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Because of time needed to edit, print and distribute this magazine, all material should reach the Editor seven weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Readers' Choice coupon "clipped from page 143 or home-made".

Due to scarcity of space, we prefer that no reader be listed here oftener than once in four months.

Use these abbrevations: *pix*, photos; *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqpmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train.

Switch List

MORRIS W. ABBOTT, 23 Bedford Ave., Milford, Conn., collects old material Colo, mountain rds., esp. interested buying Otto Mears silver, gold, buckskin annual passes; also old pix 5x7, larger.

(R) LEONARD ALDRIDGE, Jr., 308 Florence Ave., Waynesboro, Va., will sell or swap *Railroad Magazine* July '44-Dec. '45; Jan.-Dec. '45; Jan.-Aug. '46, good cond., for pix; not postpaid.

(*) G. E. ANDERSON, 19-A South College, Amherst College, Amherst, Mass. will buy or trade transfers, also elec. and steam tts., emp. tts., & tkts. Has for sale or trade (make offer) Russell's Guide 1944, 1946; Pacific Monthly 1907, Four Track News 1905-1906, and most RR. Mag. Mar. '43-May '46 all in fair condition.

GEO. J. ATCHISON, 3714 Woodlawn, R 1, Midland, Mich., will trade CMStP&P tr. ords. for other rds.

A. W. ALSTADT, 842 N. Central Park Ave., Chicago 5, Ill., will pay $5 for latest emp. timecard of C&EI.

EDW. G. BAKER, 203 N. Cherry St., Harrison, Ark., offers many clear pix, p. c. Frisco, M&A, MP, SP, L&N, UP, KCS, etc. Send 10¢ for new list, sample.

ROY F. BLACKBURN, Box 965, Grand Junction, Colo., will buy clean copy Lucius Beebe's *Trains in Transition*; *Baldwin Locos*, Jan. or Apr. '28; *RL&HS* Bulletin 36; *Off. Guide*, '15 to '18. State cond., price.

Mrs. W. E. BOWEN, Mack, Colo., has over 100-5x7, glossy finish pix, n.g. Uintah RR, abdn. '38, 35¢ ea.

JOE BOYD, 627 Decker Ave., Elmira, N. Y., buys size 116 pix, negs., shortline engs.; esp. old-time motive power.

(R) D. E. BIRCHARD, 366 Prospect St., Seattle 9, Wash., wants to sell *Railroad Magazine* Aug. '34-Sept. '46 incl., excell. cond., *National Geog.*, Nov. '33-Sept. '46, good cond.; sell in one lot or two, f.o.b. Seattle.

(*) ELMER J. BRASWELL, 1581 Melrose Dr. S. W., Atlanta, Ga., will swap p. c. pix, negs., size 616 elec. tr., trolley cars, locos. U. S. and foreign correspondents wanted.

MICHAEL BRESLOW, 3547 Cte. Famille Ste. #5, Montreal, Que., Canada, wants pix Diesel eng., steam eng., any size.

HOMER W. BURTON, 372 Qweedsmuire, Ottawa, Que., Canada, wants old tts., CPR maps '25 to '30; also maps, tts. CNR, Grand Trunk Pac.

(R) FLOYD BRUNER, East Marion, N. C., will sell *Railroad Magazine* Apr. '38; Sept. '42; Apr., Sept. '43; Feb., Apr.-July, Sept. '44; Jan., Sept.-Dec. '45; Jan.-Oct. '46; 24 emp. tts.; 22 tts; $12 for lot.

WARD J. CALDWELL, 930 E. Witherbee St., Flint, Mich., has *Trains* May-Dec. '44 to trade for Jan., Sept., Nov., Dec. '45, Jan. '46; *Model Railroader* Mar.-Dec. '44, Feb.-Nov. '45 to trade for issues prior to Jan. '42; all in good cond.

(R) GRAHAM CLARKE, Amawalk Rd., Katonah, N. Y., will sell back copies *Railroad Magazine, Trains, The Model Railroader, The Model Craftsman, Model Builder;* SP, SSW emp. tts.; size 120 pix NYC, B&M, RUT. List for stamped, self-addressed env.

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(R) EDW. J. COLGAN, 85-31 Britton Ave., Elmhurst, L. I., will sell *Baldwin Loco Mags.* Apr., Oct. '31; Oct. '32; Jan. '33; Apr.-July '34, etc.; *Railroad Magazine* '41, '42, '43. Answers all mail.

(*) GEO. CONDOYANNIS, 316 Huntington Ave., Boston 15, Mass., will buy pix interurbans, QRL&P, NYW&B, WB&A, Monong. Sys., IRC, Sou, N. Y., Milw. Elec., D&IM, Iowa lines; city lines Utica, Syracuse, Rochester, Buffalo, Indianapolis, Kansas City other cities.

(*) GENE CONNELLY, Ferguson Rd., Allison Park, Pa., has size 116 and 118 NKP, NYC, B&O, PRR and B&LE loco pix to trade for others; also Pittsburgh Rys. city and interurban trolley pix.

(*) ROBT. S. CROCKETT, 6319 Blair Rd. N. W., Washington 11, D. C., will trade eastern states elec. negs. for those Oklahoma City, Pueblo, Denver, Sioux City, Omaha, Salt Lake City, interurban system; also buys negs. of above.

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LOWELL GAMBLE, Rt. 1, Box 13, Torrington, Wyo., wants NYC emp. tts., any date, esp. Penn. Div.

(R) HENRY GERTZ, 74 Summit Circle, Little Ferry, N. J., wants *Railroad Magazine* July '46, Aug. '46, good cond.

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ERNEST H. HOBBS, 19 Darina Pl., Milford, Conn., has large assortment pix size 3½x5, 5x7 NYNH&H elec., Diesel locos, some steam. List, sample 10¢.

ROBT. C. HOFFMAN, 334 Malloy St., Orlando, Fla., wants annual, NYC, SP, ACL, FEC, PRR, SAL, LI, B&O, CNJ, Sou passes. Send price list; will swap p. c. size pix troop movement LI rr. '41.

(R) ROBT. P. HOLST, 7314 Ridge Ave., Chicago 45, Ill., wants offer for comp. file *Railroad Magazines* Oct. '06 to date; unclipped, with covers; will not break set.

(R) FRED G. HOWARTH, 3441 Bloomington Ave., Minneapolis 7, Minn., will sell or trade misc. *Railroad Magazines* '37 to date; good cond. Send for free list; wants *Trains* Apr., July, Aug. '45.

(R) EDWARD C. HOYES, 134 East St., Auburn, Calif., will sell *Railroad Magazine* Aug.-Nov. '43; Jan., Feb., '44; Aug. '46, good cond., 20¢ ea., plus post.

WM. HRIN, 20 DeKalb Ave., Plainfield, N. J., will sell to highest bidder, *Off. Ry. Guide* 1874, *Loco. Eng. Journal* 1896; emp. tts., Tuckerton RR 1913, Pittsburgh, Ft. Wayne & Chicago 1858, 1861; Ohio & Penn. 1856; Chicago & Northwestern Ry., Iowa Div. 1888; Atlantic City 1917.

(R) WM. INGRAM, 143 East A St., Upland, Calif., *Railroad Magazine, Trains, Model Railroader, Model Craftsman,* others. 1910 *Railroad Magazine,* good cond., to highest bidder; 1880 *Off. Ry.* list; 1890 Off. RR map. Send stamp for reply.

(*) SAMUEL L. JAMES, Jr., 713 Georges Lane, Ardmore, Pa., trades trolley trsfs.; wants pix Salem & Penns Grove Trac. Co., Bridgton & Millville Trac. Co.

E. R. JOHNSON, 298 Mill, Conneaut, Ohio, has old emp. time cards Nickel Plate rd., ords., wheel repr. 1884

EDW. L. KASEMAN, 819 Park Ave., Williamsport 14, Pa., has limited no. copies of his 34 page book, *Story of the Susquehanna & New York,* 50¢ ea.; will buy pix power, gen. views old Susquehanna & Eagles Mere n. g., Williamsport & North Branch, State Line, Sullivan br. LV.

(*) PHILIP L. KEISTER, Box 66, Kent, Ill., wants Vol 1. *Trains;* pix Galena & CURR (C&NW) loco 58, *Freeport,* built 1857; Rockford & Interurban & Hanover RR. (Ill.) pix, tts.; R&LHS bull. 57, *The Two Footers;* will sell Feb., Mar. '43 *Trains.*

(*) KEN KIDDER, 1948 Pacific Ave., San Francisco 9, Calif., will trade size 616 elec. ry. negs. with fans everywhere; has western, southeastern negs.; size 616 Calif. elec. pix, 6¢ ea. List for stamp.

(R) C. L. KING, 403 E. Tyler St., Dalton, Ga., will swap *Railroad Magazine,* U. S. stamps with pix trains; 1870 stamps, English coin 1674; wants U. S. silver, gold coins, used p. c.'s, letters with stamps, RR. bonds, old books, other material.

LOUIS KREWER, Demarest, N. J., will sell *Railroad Magazine* from early 30's; *Off. Guides* Aug., Sept., Oct. '42; Apr. '44; May, July, '45; Oct.-Dec. '45; July-Sept. '46, 50¢ ea. plus post.

(R) MURRAY LEVENTHAL, 1789 Commonwealth Ave., Brighton, Mass., will sell *Railroad Magazine* '38 to Sept. '46, 25¢ ea.; '31-'37, odd prices. Encl. stamped, self-addressed env.

ROGER J. LINS, Cologne, Minn., will trade copy '44 *Loco. Cycl.,* excell cond., '41 *Loco Cycl.,* or edition prior to '38. Write first.

(R) FRANCIS McNAMARA, 2 Read St., New Haven 11, Conn., has *Railroad Magazine* Nov. '34; Sept. '37; Apr., Sept., Dec. '38; May, June, Sept.-Dec. '39; Jan., Mar.-Dec. '40; Mar., Apr., Aug., Sept., Nov., '41; Feb., May-Dec. '42; Jan.-July, Nov. '43; wants old passes, old tts., cash fare receipts, etc. Send list.

(R) CHAS J. McQUEEN, 3712 Midland Ave., Detroit 21, Mich., will buy May '46 *Railroad Magazine,* in good cond.

JOHN DeWAAL, Malefyt, 35 Belle Ave., Paterson 2, N. J., will sell July '41; Aug., Dec. '42 *Off. Ry. Guide.* Make offer.

CHAS. MANCHESTER, UP RR., Pocatello, Idaho, wants pix. tts., mags., eastern rds.; has tts., pix, etc. of UP.

(*) JOHN W. MELTON, Jr., 3329 Montgomery Rd., Cincinnati 7, O., will trade Cinn. St. Ry. trsfs. for any others; wants to hear from rail fans in Atlanta, Ga., Birmingham, Ala.

ALDEN E. MILLER, 3212-34th Ave. So., Minneapolis 6, Minn., will sell binders for *Trains, Journal of Ac-*

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countancy, Movie Makers, Home Movies; also early, current issues movie, camera mags. for sale; will buy C&NY historical memorandum.

(*) RAY MILLER, 4226 N. 15th St., Phila., 40, Pa., has trolley, interurban pix in east to trade for other juice pix; size 116, p.s c.; trsfs., tts. to those sending stamped, return env. State your wants.

(R) E. L. MEIER, Hitchcock, Texas, will trade any 2 copies *Railroad Magazine* of Dec. '44; Jan.-Nov. '45; Jan. '46 to date, for one copy *Trains*, any date; also has *Model Railroader* '40 to date for *Trains* mag. Send list.

TOM MOHR, 2250 W. Giddings St., Chicago 25, Ill., wants pix GTW, IC, Alton; Alton *Abe Lincoln* Diesel units; Nov. '45 *Model Craftsman*, NYC *Niagara* plans.

HASKELL MYERS, R. R. 1, Shelbyville, Ind., will sell collec. over 1000 loco pix size 116, $25; 100 diff. rds.; also size 5x7, 8x10.

(*) HAROLD NYBERG, 4 Pioneer Ave., Battle Creek, Mich., has large selec. Midwest elec. pix; also west coast lines, 7¢; or trade for pix of west coast, Midwest, Penn. elec. lines. List free.

JAMES D. ORSBORN, 514 W. 66th Pl., Chicago 21, Ill., will trade for n. g. pix, p. c. size Silverton-Northern n. g. in oper., now abdn., 10¢ ea. List for stamp.

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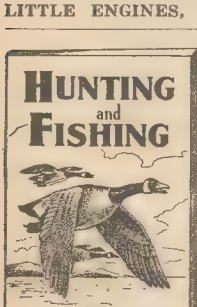

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CHAS. E. PEARCE, 25-26 18th St., Long Island City 2, N. Y., will buy size 116, larger pix locos., cars, structures Colo. n. g. rds., esp. DSP&P, Colo. Central, Colo. & Southern. Wants lists, will return.

(R) ROB POMEROY, 824 Levering Ave., Los Angeles 24, Calif., wants *Railroad Magazine,* Jan. '46; *Trains,* bound vol. 1, 2, 3; emp. tts. Ga. RR., all excell. cond., will pay any price; also wants to correspond with Jim Carpenter, formerly of 2239 10th Ave., Oakland, Calif.

HAROLD L. PHILLIPS, Box 241, Millis, Mass., will sell *Behind the Scenes of a RR. at War,* 5¢; *Five Years of War Can. Nat. Pub.,* 5¢; other books, emp. tts.? postage stamps will be accepted.

DONALD A. POPE, 329 Pearl St., Richmond, Ind., has excell. pix PRR new T1; *the American, The New Sunshine Spec.; Spec.;* all pix size 116.

CYRIL KIDD, 5 Moor Park Rd., East Didsbury, Manchester, England, wants to hear from fans who collec. RR. post office envs. with stamps, R. P. O. on them; tts. diff. rds.

T. Sgt. H. N. PROCTOR, Apt. 181-B, Fort Ethan Allen, Vt., has RUT, CV, D&H, NYC, StJ&LC, CNR, N&StL, NJRy. size 616 pix, negs. to sell, trade; wants loco rosters.

JOHN T. RICHARDS, 1324 Perkiomen Ave., Reading, Pa., wants to buy or trade tts. prior '28; also foreign tts., any date.

JOHN H. ROUGEAU, BOX 71, Bridgeboro, N. J., will sell 173 U. S., 104 French, 187 English p. c. size loco pix; also boat, airplane, pix; no list; $10 for lot.

C. A. ROWE, 218 W. Terrace St., E. Syracuse, N. Y., wants to resume pix swapping, selling; also to hear from any one to whom he is indebted; has size 116 pix.

(R) A. SADOWNICK, 183 E. 2nd St., New York 9, N. Y., will buy size 116 loco, caboose, stock car, snow plow pix Algoma Central & Hudson Bay, Ontario Northland, Northern Alberta, CP, CN; has *Railroad Magazine, Trains, Model Railroader* for sale or trade. Send list.

(*) OWIS D. SCOTT, 9411 Alverstone, Los Angeles 45, Calif., wants pix p. c. size, smaller; negs., info., plans of trolleys, R. P. O. cars, frt. locos; also any kind rd., line cars.

HERBERT SEUS, 85-21-52 Ave., Elmhurst, N. Y., wants Diesel, steam loco pix, in good cond. Send lists.

A. R. SHADE, Jr., R. F. D. 2, Columbia Sta., O., sells tr. ords. B/4, once NYC, 1¢ ea.

JOSEF B. SHARP, 210½ Indiana St., Greencastle, Ind., wants rr. uniform buttons, all rds.; will pay cash or trade size 620 pix NYC, PRR, Monop, taken locally.

HERBERT SNYDER, Mohrsville, Pa., has number unique timetable cards Phila. & Reading RR., dating from 1842 when road opened to 1860 incl., now known as Reading Co.; also for trs. running between Harrisburg and Allentown, Pa.; odd, old rulebooks; also very old bulletins, executive ords., written with pen, ink. Write, make offer.

JACK STANSEL, 328 Johnston Ave., Trenton 9, N. J., wants *Trains,* Feb. '42, earlier. Give price and cond.

(R) A. A. STEWART, 1495 West Queen St., Apt. 1, Toronto 3, Canada, wants early issues *Railroad Magazine;* also pix Jersey Central trs., camelback eng.

MURRAY F. STONE, Box 819, 38 Winnifred St., Smiths Falls, Ont., Canada, has quantity size 620 pix CPR trs., engs., for sale or trade; wants pix Am. rds., northern, western Canada. List on request.

(R) HARRY A. SUMMERS, 1435 Ashland Circle, Norfolk 5, Va., has several issues *Railroad Magazine;* old tinplate catalogs, 20 issues *Trains* mags. to trade for early Ives, Bing, Marklin catalogs. List for stamp.

(R) CLARENCE B. SWOYER, Box 22, Duke Center, Penn., will pay 25¢ ea. for *Railroad Magazine,* Jan., Feb. '43; Mar., July '42; July, Nov. '41; Apr., July, Oct. '40; '37, exc. Apr., Aug., Oct., Nov.; all '36; '35, exc. Nov.

RONALD FISCHER TENNY, Jr., 99-21 208th St., Queens Village 9, N. Y., wants to hear from fans who took Oct. 20th, Jersey trip; will buy or trade pix coal dumper at South Amboy; also wants 4wh. crummy pix any RR.; size 120, 620. Send self-addressed env.

I. M. THOMPSON, 280 Becontree Ave., Dagenham, Essex, England, has pix, tts., all British locos, trs., subways; expects to visit Am. next year and wants to correspond with rr. fans in Pa., N. Y. areas.

(*) GEORGE E. TILLITSON, Rt. 3, Box 1216, Auburn, Wash., will buy or trade emp. tts. for history, mileage, tts., maps of street, interurban, logging rrs.

(R) J. R. WANLESS, 762 Battle St., Kamloops, B. C., Canada, will sell *Railroad Magazine* Dec. '29 to

date, one index, some early covers missing; otherwise intact; 204 issues, $75.

(*) DON WARNER, Box 1581, Lakeland, Fla., has trsfs., tkts. Tampa Elec. Co., Miami Beach Ry. Co. street-ry. lines; will trade item for item on tokens.

RICHARD C. WEISSMAN, 112-50 78th Ave., Forest Hills, L. I., wants all Chicago suburban tts.; needed for composition; will trade any tts.

(*) ROBT. WILKENS, 11 Avon Rd., Hewlett, N. Y., wants to hear from all interested in New York City Rapid Transit Sys.; will sell, trade New York El pix for El pix, any city; also wants LI RR. pix.

ROBT. E. WILLCOX, Box 712, GPO, New York City 1, N. Y., wants size 20x20 pix PRR *Mikado*, pref. rough mount.

(R) F. L. WILLETT, 804½ E. Northlake Ave., Seattle 5, Wash., will sell *Railroad Magazine* Feb., Aug. '32; Jan.-Aug., Oct. '33; Apr., May, July-Dec. '34; all '35, '36, '37, '38, '39, '40, exc. Dec.; Jan.-June '41.

PAUL WINCHESTER, P. O. Dept., Covington, Ky., will buy 8 mm. movies on railroading.

ROBT. F. WOLTER, Montezuma, Ind., will buy, trade tr. ords., any rd. for C&EI rr., tr. ords. with clearance cards; will trade for C&EI tts., emp. tts.

WM. WRIGHT, Sr., 26 East 20th St., Paterson 3, N. J., has size 116 pix Erie, Lackawanna, many others; Susquehanna '77, about 1899. Send stamp for list, prices.

Model Trading Post

GEO. BARKER, Jr., Essex, Ill., will sell 6x4 ft. plywood, one 4-6-2 eng. tank car, hopper car, wrecker car, log car, caboose, 100W transf., automatic uncoupler, switches, cur. track, str. track, bridges. All AF 3/16 eqpmt., good cond. Best offer takes all

ARTHUR P. BENNETT, 1350 Boston St., Aurora 8, Colo., wants Lionel eng. 258, 0 gage.

WM. H. COX, 1146½ S. Clark Dr., Los Angeles 35, Calif., will sell live steamers, Atlantic 2½ in. gage, custom built, $350; also ¼ in. scale Pac. almost comp. from Little Eng. kit, $235. Make offer; might trade.

A. H. ESBENSHADE, 513 Snader Ave., Ashland, O., will sell comp. set *Railroad* to highest bidder, express collect; 200 pcs. Lionel, AF wide gage track, rolling stock.

E. GROSSENBACHER, Jr., 66 Taylor St., Pittsfield, Mass., wants std. gage Lionel 6, 7, steam type Am. 8-wheeler made prior to '25.

(*) Dr. G. HARRISON, 307 Washington, Waukegan, Ill., offers top cash for old style locos, trolley cars, German, U. S. makes; old train catalogs, wants any German trains. Will trade new HO, 0 locos, sets, Lionel, AF Varney, Mantua, Marklin.

E. W. HAYES, 1608 Bradt St., East Chattanooga, Tenn., wants to correspond with anyone building eng. models around Chattanooga, Atlanta, Ga.

(*) SCOTT HOLLOWAY, 1106 Cedar St., Palestine, Tex., wants to hear from those interested in model cities, model streetcars, car lines; also pix of same. Will trade pix miniature city for your model city or car pix.

FRANZ KARN, 2713 So. 13th St., St. Louis 18, Mo., has Lionel 225 eng. cars; wants AF 3/16 in. coaches 521, 524 (12 wanted).

LOUIS KATZIANER, 66 Jubilee St., New Britain, Conn., has Lionel loco to trade for one 708 switcher, 717 caboose; 993 B, 907 switcher, 12956 hopper, must be in best cond.; or sell to highest bidder.

GEO. A. KEHL, Mendota, Minn., *exp. rr. machinist*, will sell brand new, precision-built Mantua Moguls, $31.50 unpainted.

STEPHEN KOSTELNY, Jr., 5619 Ainslie St., Chicago 30, Ill., wants to buy AF 3/16 in. scale trains, eqpmt. for cash.

Dr. CASE KOWAL, 1846 W. Cullerton St., Chicago 8, Ill., will buy old toy trains, toy catalogs, before '20.

BRUCE LANE, 1315 Vassar Dr., Kalamazoo, Mich., will buy std.-gage tinplate, the older the better.

GEO. L. LAMED, 9 Orchard Rd., Larchmont, N. Y., wants Lionel, AF catalogs, prior '30.

ERNEST MIZERAK, 4125 W. 111th St., Inglewood, Calif., trades stamps, based on *Scott's* catalog for Lionel, AF 0 gage eqpmt.

MANUEL NORIEGA, 19 Hartford St., San Francisco 14, Calif., will pay good price for Lionel std. gage eqpmt., good cond.

GUS ROTH, 39 Willets Rd., Harrison, N. Y., will sell std.-gage rr., like new; elec. type loco, 19 pass.,

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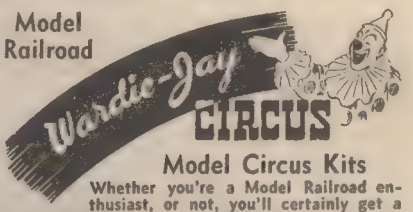

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A. D. SLATER, 1596 Wood Rd., Cleveland Hts. 21, O., will sell to highest bidder, wooden ornamental replica 0-4-0 N. Y. Elevated rr. loco.; also C. P. Huntington. Both built ⅝ in. to scale, machinery operated; ea. in glass case.

DANIEL STITELER, West Main St., Elverson, Pa., has tinplate 0 gage, 1 loco, 18 frt., 3 pass. cars, 10 switches, track, etc. Free list.

THOMAS STRAUSS, 902 Main St. N. E., Minneapolis 13, Minn., wants Marx train switches, left or right turn; C&Q pix.

WALTER UNRAH, Woodcliff Lake, N. J., will swap album with 500 diff. stamps, 15 straight sections Lionel 0 gage track, track bumper, R.C.S. track section with control, and 12 sections 027 track. Wants AF, HO equipment.

HAROLD E. WILLIAMS, 168 Bay St., Providence 5, R. I., wants old wind up 0 gage engs., tenders; also four wheel cars; offers in trade *Rules for the Oper. and Supervision of Air Brake, Train Air Signals;* also *Constitution Statutes, Rules of Order of Ry. Conductors.*

EDW. O. ZIEMANN, 3610 So. Wolcott Ave., Chicago 9, Ill., has std. gage 367 W pass. train set, 385 E steam eng., whistle, tender; 1700 series cars, '36 series, almost new cond.; few of this type. Write for info.

Flag Stops

CLEAR TRACK AHEAD—sound film story of rail transportation from the picturesque *John Bull* a century ago to today's streamlined stream, electric and Diesel giants—is available free of charge to schools, churches, service clubs and other organizations from the Pennsylvania Railroad. The men who run trains; the yards, terminals, shops and laboratories; scenes along the rights-of-way: these and more comprise the 25-minute, 16 mm movie. Showing in U.S. booked through G. E. Payne, Publicity Rep., Pennsylvania RR., Broad St. Station, Philadelphia 4, Pa.

CALENDAR for 1947 prepared by San Francisco branch of Railroadians of America features locomotive *San Juan* of Denver, South Park & Pacific, famed Colorado narrow-gage operator of Mason bogie engines. Map, brief history and roster, together with mounted calendar pad, are included within 13x22 in. version of last year's model. Postpaid within U.S. at 50c each, from Railroadians of America, Inc., 1500 Chanslor Ave., Richmond, Calif.

HARDY'S MANUAL for 1946 contains short writeup of books, photos, maps, timetables, other railroadiana, cataloged in smooth-paper, illustrated booklet. Resume of what's available in rr. market can be had from Grahame H. Hardy, 2046 E. 14th St., Oakland 6, Calif.

NEW trains, new equipment and new aggressive policy of the C&O will be discussed by Milton Sanchez—rail-fan in position to know the C&O—at January 22nd meeting of Railroad Enthusiasts, Rm. 5030, Grand Central terminal, New York.

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